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COMMISSIONER OF HEALTH,

Commonwealth of Pennsylvania.

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THE NINTH ANNUAL REPORT

OF THE

COMMISSIONER OF HEALTH

FOR THE

COMMONWEALTH OF PENNSYLVANIA

1914

PART I



HARRISBURG, PA.:
WM. STANLEY RAY, STATE PRINTER
1916

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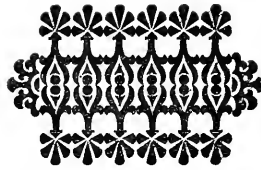


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LETTER OF TRANSMITTAL.

Commonwealth of Pennsylvania,
Department of Health,
State Capitol, Harrisburg,

February 1, 1915.

To His Excellency, Martin G. Brumbaugh, Governor of Pennsylvania:

Sir: The Act of Assembly by which the Department of Health was created prescribed that the Commissioner shall annually report on the vital statistics and sanitary conditions and prospects of the State, and set forth the action of the Department and of its officers and agents, and the names thereof during the past year. Such a report for the year 1914, being my ninth annual report, I have now the honor to transmit. Other work done by me as a servant of the State in positions which I have held *ex officio* (State Quarantine Board, Water Supply Commission, Dental Council, and Bureau of Medical Education and Licensure) is given in the reports made by these bodies respectively.

SAMUEL G. DIXON,
Commissioner of Health.



NINTH ANNUAL REPORT
OF THE
COMMISSIONER OF HEALTH
OF THE
COMMONWEALTH OF PENNSYLVANIA.

As Commissioner of Health for this Commonwealth of Pennsylvania I can assure you it is gratifying to me to submit this, my Ninth Annual Report of my activities as executive of this Department and as a servant of a people who have through their members of the General Assembly and the Governor appropriated more money to health than any other state of the Union. The responsibilities are necessarily commensurate with the means that have been provided to carry on this work upon which the prosperity of the State and the happiness of the people so largely depend.

ORGANIZATION.

The year 1914 has brought numerous changes in many of the Divisions of the Department of Health. A full enumeration of those who held positions in the past twelve months will appear below. Concerning some of the changes a brief comment may be made.

On the first of March the death of Dr. Paul A. Hartman deprived the Department of the services of one of its most efficient County Medical Inspectors. He was born at Lebanon, December 24, 1850, as the son of the late John Joseph and Wilhelmina Steever Hartman. Later the family lived for a time in Lycoming County, but when young Hartman was nearly fourteen they removed to Harrisburg. After attending the public schools, Paul Hartman studied in the State Normal School at Kutztown, and was then enrolled as a student of Dickinson College. His medical studies were begun under the direction of the late Dr. Robert F. Seiler, and later continued in the Jefferson Medical College of Philadelphia, where he took his degree in 1874. He at once established himself as a practitioner at Harrisburg and there he continued to practise the rest of his life, almost forty years.

When the State Board of Health made a new inspection district by joining Cumberland and Adams Counties with Franklin and Perry, the "Susquehanna District," thus reduced to Dauphin, Lancaster, and York Counties, was placed in charge of Dr. Hartman, his appointment being made July 13, 1887. In this office he continued to serve until early in 1895 when the system of County Medical Inspectors was adopted by the Board and Dr. Hartman accepted an appointment as Medical Inspector of Dauphin County. When the new Department of Health was established in 1905, many of these County Medical Inspectors were retained in the new organization, among them Dr. Hartman. In July, 1907, I began the development of our system of State Tuberculosis Dispensaries, purposing ultimately to establish at least one in each county. At first we had to feel our way, and progress was slow; consequently it was not until the end of March, 1908, that the Dispensary in Harrisburg could be opened. I placed Dr. Hartman in charge of this work and under his direction the Dispensary produced good results.

Dr. Hartman was well known to the community in which he lived, and enjoyed a reputation as a diagnostician in skin diseases, especially in cases of smallpox. He was esteemed by his professional brethren as "a man whose word was as good as his bond." He was a member of the Dauphin County Medical Society, its President in 1885, and for twenty-one years its Secretary. On two occasions he was sent as a delegate to the meeting of the American Medical Association. He was also a member of the Harrisburg Academy of Medicine, and of the staff of the Harrisburg Hospital, and for some years he served the County as physician to the County Prison, and also the city in various official capacities.

On the last day of February, 1914, in the midst of his work at the Dispensary, Dr. Hartman was stricken. Such was his condition that removal to his home was quite out of the question, and there in the Dispensary he lingered until the afternoon of the next day when the end came.

Late in the year the Department lost the services of another County Medical Inspector by the death of Dr. Bonbrake in the Markleton Hospital, on the twenty-second of November. Henry X. Bonbrake was born in Washington Township, Franklin County, March 31, 1843, the son of Daniel and Margaret (Stoner) Bonbrake. He was educated at what was then Mercersburg College, and began the study of medicine under the preceptorship of Dr. J. J. Oellig and later of Dr. James Brotherton, both of Mercersburg. In the spring of 1865 he graduated from the Bellevue Hospital Medical College of New York, and presently began practice in Leitersburg, Maryland. Here he remained but a short time and then removed to

Mont Alto in Franklin County where he practised for nearly twenty-five years. During a large part of this time he was manager of the Iron Company's Forge at Mont Alto, serving also as chemist and physician of the company. In 1889 Dr. Bonbrake removed to Chambersburg where he speedily became a successful practitioner. He was a visiting physician to the Chambersburg Hospital and the Franklin County Almshouse, and was the county coroner from 1890 to 1894. He was an active member of the Franklin County Medical Society, serving in due time as its president, and was also a Fellow of the American Medical Association. In 1903 he became the County Medical Inspector for the State Board of Health and was retained in that position when the present Department of Health was organized in 1905. On the establishment of the Tuberculosis Dispensary at Chambersburg, in November 1907, I placed it in charge of Dr. Bonbrake.

The vacancies in the County Medical Inspectorships I filled by the appointment of Dr. Clarence R. Phillips of Harrisburg, for Dauphin County, and Dr. Paul P. Allen of Chambersburg, for Franklin County. Dr. Phillips was also appointed chief of the Dispensary at Harrisburg.

Among our Health Officers there were nine deaths and sixty resignations. I made forty-nine new appointments to this body. The deaths were as follows:—in February, Milton Huston of Portland, Northampton County, and Henry Deisenroth of Freeland, Luzerne County; in July, Thomas E. Morthimer of Lehighon, Carbon County, and E. C. Shoemaker of Meyersdale, Somerset County; in August, P. F. Brown of Allentown, Lehigh County; in September, John McBride of St. Marys, Elk County, Henry A. Kolbe of Doylestown, Bucks County, and C. H. Wilton of Marienville, Forest County; and in December, B. J. Schlosser of Schwenksville, Montgomery County.

In the Division for the Control of Tuberculosis there were many changes among the more responsible officials of the office staff of the Sub-division of Tuberculosis Dispensaries. Dr. Edward B. Shellenberger, who had been Deputy Medical Inspector of Dispensaries since October 1913, resigned on the first of June to take up again the psychiatric work which had formerly been his chief interest. In August I appointed Dr. Karl Schäffle, an assistant physician in one of our Philadelphia Dispensaries, to fill the vacant position in Harrisburg. Early in October in view of the prospective opening of the new Sanatorium at Hamburg, I chose Dr. Thomas H. A. Stites to become the Medical Director at Hamburg when that institution should be actually ready for service. Dr. Stites had been the Medical Inspector of Dispensaries ever since this work was established in 1907. On the first of November I advanced Dr.

Schäffle from the position of Deputy to that of Acting Medical Inspector of Dispensaries, and one month later I filled the vacant position of Deputy by the appointment of Dr. Frank F. D. Reckord of Harrisburg. Miss Margaret McGannon was added to the office staff as stenographer.

The death of two of our County Medical Inspectors, Dr. Paul A. Hartman and Dr. H. X. Bonbrake, already elsewhere noted, deprived the Departmental Tuberculosis Dispensaries at Harrisburg and Chambersburg of valuable chief medical officers. As elsewhere shown these vacancies were promptly filled. Only one other transfer was made during the year, Dr. B. A. McDermott, who, after serving for some time in one of the Philadelphia Dispensaries of the Department, was made Deputy Medical Director of the Hamburg Sanatorium.

Other physicians also retired from the Dispensary service as follows: Dr. D. P. Ray (Johnstown), January 13; Dr. C. W. Sample (Pittsburgh), February 1; Dr. G. A. Stock (Danville), March 24; Dr. J. P. Kennedy (Columbia), March 24; Dr. L. N. Reichard (Brownsville), April 1; Dr. J. T. Rimer (Clarion), April 1; Dr. J. L. Warne (Pottsville), June 10; Dr. W. C. Hogan (Bradford), August 4; Dr. Charles Weber (Philadelphia), November 1; Dr. A. L. Shearer (Harrisburg), November 14; Dr. S. P. Hakes (Tioga), November 14; Dr. E. E. Shifferstine (Tamaqua), December 8; Dr. H. C. Kinzer (Lancaster), December 31.

Among the Dispensary Nurses transfers occurred in the sense that Miss Jessie G. Barclay, Miss Anna Grafe, Miss Rosa McClintock, Miss Sara A. Crooks, and Mrs. Jane P. Miller, each attached to several Dispensaries, had their duties concentrated in a smaller number of places as appears in the list below, and the following retired during the year: Miss Carolina M. Anthony, Miss Alice M. Chubb, Miss Mary G. Connelly, Miss Hannah P. Guthrie, Miss Louise E. Koenig, Miss Anna F. Kutzer, Miss Rosa McClintock, Miss Margaret McMahan, Miss Mary G. Maloney, Miss Mary E. S. Miller, Miss Kathryn Shepard, Miss Frances Swope, Miss Emma J. Watts, Miss Marie Williamson, Miss Flora Wilson, Mrs. C. A. Wordinger, as well as Miss Mary F. Bryan and Miss Nettie B. Campbell who had served as clerks.

In the Dispensaries affected by the deaths and resignations already noted certain changes in the staff were made, in the nature of promotions, as appear in the detailed list. The following appointments of Dispensary Physicians were made in the course of the year: Dr. A. H. Davison (Ardmore), March 15; Dr. Cameron Shultz (Danville), March 24; Dr. Richard Reeser (Columbia), March 24; Dr. F. P. Phillips (Clarion), April 1; Dr. Isaac H. Jones (Philadelphia), April 1; Dr. C. H. Grimes (Philadelphia), April 1; Dr.

Carl Brown (Scranton), May 1; Dr. F. S. Hoover (Brownsville), May 14; Dr. J. W. E. Ellenberger (Pittsburgh), June 1; Dr. James B. Heller (Pottsville), August 1; Dr. Wade Paton (Bradford), August 4; Dr. J. P. Frantz (Philadelphia), October 1; Dr. Fred B. Harding (Tamaqua), December 8; Dr. C. W. Webb (Wellsboro), December 22 (after having charge of the Tioga Dispensary since November 14).

The following were made Dispensary Nurses: Miss Mary E. Brua, Mrs. Carrie P. Butler, Miss Eleanor Caffrey, Miss Carolyn E. Ellwanger, Miss Margaret Fothergill, Miss Della A. Glenn, Miss Elda Graybill, Miss Bess M. Hepburn, Miss Bess Johns, Miss Louise E. Koenig, Miss Helena O'Hara, Miss Mayme A. Peck, Mrs. Florence Peter, Miss Anna Prather, Miss Sara K. Trimble, Miss Mary E. Walsh, Miss Marie Williamson, Miss Marie E. Wittig; and Robert A. Brandt, Miss Mary F. Bryan, and Miss Agnes Souder were appointed Dispensary Clerks.

For the Sanatorium at Mont Alto the following changes are notable: At the end of August Dr. Edwin R. Vander Slice retired after acting as assistant physician for two years and a half to become the Medical Superintendent of the State Tuberculosis Sanatorium of Nebraska. At the end of November Dr. Samuel C. Jaspan gave up the position as assistant physician which he had filled for eighteen months and entered upon private practice in New Jersey. As assistant physicians on the medical staff I appointed Dr. Joseph Aaronoff and Dr. Herman Schlaff. Early in September Mrs. Laura B. Cleaver resigned her position as Head Nurse at the Children's Hospital and in her stead I appointed Miss Catherine I. Cobb.

At the Cresson Sanatorium the medical staff lost the Deputy Medical Director, Dr. S. H. Rinehardt, who retired to establish himself in private practice at Pittsburgh. Resignations also came from the Assistant Physicians, Dr. Samuel Gross and Dr. J. W. E. Ellenberger, who wished to take up private practice in Philadelphia and Wilkesburg respectively. Another Assistant Physician, Dr. R. V. Zabarkes, was transferred to the Hamburg Sanatorium late in the year. In the course of the year I appointed two new members of this staff: Dr. D. S. Brachman who came on duty in June, and Dr. M. E. Cowen who entered the service in November.

In the Division for the Distribution of Biological Products several changes have taken place. At the end of last year the position of Chief of the Division became vacant by resignation. For the next ten weeks or so the practical work of the Division was carried on by the office staff under my personal supervision. I then named Dr. J. Moore Campbell of Philadelphia to fill the vacancy. Dr.

Campbell had been in service in our departmental laboratories in Philadelphia for about two years and a half and possessed much familiarity with the technical and medical aspects of our preparations besides other qualifications of a good bureau chief. Under his control the work of the Division has undergone a careful revision and many improvements have been introduced to increase the effectiveness of our distribution of biological products. In June, Mrs. Lucy A. Thompson resigned to take a more lucrative position at a distance after being an exceptionally valuable asset of the Division from its establishment in 1905.

In the Division of Sanitary Engineering important changes have occurred. Early in the year F. Herbert Snow, who had efficiently served as Chief Engineer since August 25, 1905, resigned his position to become Chief of the Bureau of Engineering under the Public Service Commission. I then appointed as acting Chief Engineer Charles A. Emerson, Jr., who since October, 1910, had filled the position of Principal Assistant Engineer in charge of Design and Construction.

A few new appointments were made. On July 1st, A. J. Smalshaf was appointed as Assistant Engineer for Designs and Construction, and October first, L. M. Fisher and Joseph A. Tinsman as Assistant Engineers for Waterworks and Sewerage Investigations. On March 31 the Engineering Assistant Wilson W. Ritter, resigned. On May 5th Charles T. Maclay was transferred from the position of an Engineering Assistant to that of Sanitary Inspector, a position which he resigned on the first of December. On July 30, H. M. Walter resigned from the draughting room. On May 1, Miss M. Irene Cuenot resigned her place as stenographer, as on October 1, did also Miss Jane Gilbert, to take positions as stenographers in other departments at larger salaries. These vacancies I filled by the appointment of Miss Margaret Small, on September 14, and Miss Bulah L. Koons on the first of December. Among the Sanitary Inspectors resignations came from Robert M. Courtney, February 1, W. S. Hood, March 31, Lester L. Pierce, November 1, and Charles H. Spelker, November 30; and on the first of July Charles L. Baucher was appointed a member of this body.

As required by law I hereby furnish a list of officers and agents of the Department during the year 1914.

STATE CAPITOL, HARRISBURG.

Commissioner of Health: Samuel G. Dixon, M. D., LL. D.,
Bryn Mawr, Montgomery County.

Advisory Board—Charles B. Penrose, M. D., Philadelphia.
Adolph Koenig, M. D., Pittsburgh, Allegheny County.
B. H. Warren, M. D., West Chester, Chester County.
Lee Masterton, C. E., Johnstown, Cambria County.
George W. Guthrie, M. D., Wilkes-Barre, Luzerne County.
Clarence J. Marshall, V. M. D., Philadelphia.

GENERAL DIVISION.

Assistant to Commissioner, Joseph W. Warren, M. D., Bryn Mawr, Montgomery County.
Secretary, Harry Lindley Hosford, Philadelphia.
Auditor, Miss Ivy E. Huber, Harrisburg, Dauphin County.
General Inspector, Charles W. Webbert, Boiling Springs, Cumberland County.
Stenographers—Miss Edna Hosler, Carlisle, Cumberland County.
Miss Miriam R. Jenkyn, Duncannon, Perry County.
Messenger, Edward F. Eisely, Harrisburg, Dauphin County.
Night Clerk, Roy G. Miller, New Kingston, Cumberland County.
Multigraph Operator, R. K. Styer, Perkiomenville, Montgomery County.
Janitor, John B. Sample, Harrisburg, Dauphin County.

MEDICAL DIVISION.

Chief Medical Inspector, B. Franklin Royer, M. D.,
Philadelphia.

Associate Chief Medical Inspector, C. J. Hunt, M. D., Philadelphia.
Assistant Chief Medical Inspector, John J. Mallowney, M. D., Philadelphia.
Chief Clerk, John G. Ziegler, Lebanon, Lebanon County.
Stenographers—Miss Fannie A. Houseknecht, Muncy, Lycoming County.
Mrs. Nell Dalzell Buch, Reading, Berks County.
*Miss Emma Leib, Harrisburg, Dauphin County.
Miss Nettie J. Hipple, Marysville, Perry County.
Miss Nora C. Cantwell, Williamsport, Lycoming County.
Miss M. Florence Keffer, Reading, Berks County.
Clerks—Mrs. Rosa Van Horn, Harrisburg, Dauphin County.
Miss Maude Van Ormer, Harrisburg, Dauphin County.
*Miss Mary Weigle, Harrisburg, Dauphin County.
Miss Aida Beuter, Wellsboro, Tioga County.
Miss Bess Fairbank, McGees Mills, Clearfield County.

*Resigned.

Miss Irene McCalley, Harrisburg, Dauphin County.
 Miss Florence Eckert, Lancaster, Lancaster County.
 Miss Caroline Grove, Harrisburg, Dauphin County.
 Miss Ada M. Hartman, Mifflintown, Juniata County.
 Mrs. Edna P. Rockefeller, Erie, Erie County.
 Miss Kathryn A. Stailey, Liverpool, Perry County.
 Miss Katherine Williams, Everett, Bedford County.

Temporary Clerks—Mrs. Alice Johnson, Montgomery County.

Miss Nan McCauley, York County.
 Miss Lucetta F. Eckert, Lebanon County.
 Miss Alice H. Miller, Lycoming County.
 Miss Katherine Darby, Dauphin County.
 Miss Katherine McAlevy, Dauphin County.
 Miss Mary E. Seidel, Dauphin County.
 Mrs. Helen Brown, Dauphin County.
 Miss Mildred Ritter, Dauphin County.
 Mrs. Sara Zink, Dauphin County.
 Mrs. Sarah Corning, Dauphin County.
 Miss L. Leona Teeter, Franklin County.
 Miss Carrie F. Reichert, Dauphin County.
 Miss Katherine Williams, Bedford County.
 Miss Mary C. Foltz, Dauphin County.
 Miss Helen E. Whiteman, Dauphin County.
 Mrs. H. C. Schimmelfeng, Dauphin County.
 Miss Ethel G. Bratton, Dauphin County.
 Miss Elsie Yount, Dauphin County.
 Miss Isabelle C. Hoffman, Philadelphia.
 Miss Helen Campfield, Crawford County.
 Miss Elmyra R. Stabley, Lebanon County.
 Miss Edith K. Leahy, Lebanon County.
 Miss Blanche Bower, Columbia County.
 Miss Marie Melville, Dauphin County.
 Mrs. Virginia Beidleman, Dauphin County.
 Miss Annetta L. Altmaier, Dauphin County.
 Mrs. J. S. McCaleb, Cumberland County.
 Mrs. Scott Wright, Dauphin County.
 Miss Edith Dunner, Dauphin County.
 Miss Sara E. Miller, Dauphin County.
 Miss Marcella O'Gorman, Dauphin County.
 Miss Ella Sharosky, Dauphin County.
 Miss Mary C. O'Boyle, Schuylkill County.
 Miss Kathryn McClosky, Schuylkill County.
 Miss Martha Boudman, Dauphin County.
 Miss Ellen F. Flynn, Dauphin County.
 Miss Fannie C. Stailey, Bedford County.
 Miss Anna M. Shelly, Juniata County.
 Miss Marie Toomey, Dauphin County.
 Miss Mildred Williams, Bedford County.
 Miss M. M. Kennedy, Philadelphia.

COUNTY MEDICAL INSPECTORS.

County.	Inspector.	Post Office.
Adams,	Dr. John R. Dickson,	Gettysburg.
Allegheny,	Dr. S. M. Ruelhart,	Pittsburgh.
Armstrong,	Dr. T. N. McKee,	Kittanning.
Beaver,	Dr. Bruce Snodgrass,	Beaver Falls.
Bedford,	Dr. Walter de la M. Hill,	Everett.
Berks,	Dr. Israel Cleaver,	Reading.
Blair,	Dr. J. D. Findley,	Altoona.
Bradford,	Dr. T. Ben Johnson, Jr.,	Towanda.
Bucks,	Dr. I. Swartz Plymire,	Doylstown.
Butler,	Dr. H. D. Hockenberry,	West Sunbury.
Cambria,	Dr. W. E. Matthews,	Johnstown.
Cameron,	Dr. H. S. Falk,	Emporium.
Carbon,	Dr. E. G. Bray,	Mauch Chunk.
Centre,	Dr. S. M. Huff,	Bellefonte.
Chester,	Dr. Joseph Scattergood,	West Chester.
Clarion,	Dr. J. T. Rimer,*	Clarion.
Clearfield,	Dr. F. P. Phillips,	Clarion.
Clinton,	Dr. S. C. Stewart,	Clearfield.
Columbia,	Dr. R. B. Watson,	Lock Haven.
Crawford,	Dr. S. B. Arment,	Bloomsburg.
Cumberland,	Dr. J. K. Roberts,	Meadville.
Dauphin,	Dr. H. B. Bashore,	West Fairview.
Delaware,	Dr. Paul A. Hartman,†	Harrisburg.
Elk,	Dr. C. R. Phillips,	Harrisburg.
Erie,	Dr. Hiram M. Hiller,	Chester.
Fayette,	Dr. J. G. Flynn,	Ridgway.
Forest,	Dr. J. W. Wright,	Erie.
Franklin,	Dr. O. R. Altman,	Tionesta.
Fulton,	Dr. F. J. Borard,	Chambersburg.
Greene,	Dr. H. X. Bonbrake,†	Chambersburg.
Huntingdon,	Dr. Paul P. Allen (Acting),	McConnellsburg.
Indiana,	Dr. J. W. Mosser,	Waynesburg.
Jefferson,	Dr. J. T. Jams,	Huntingdon.
Juniata,	Dr. H. A. Frantz,	Indiana.
Lackawanna,	Dr. W. A. Simpson,	Puuxsutanwey.
Lancaster,	Dr. S. Meigs Beyer,	Millintown.
Lawrence,	Dr. W. H. Banks,	Seranton.
Lebanon,	Dr. J. C. Reifsnyder,	Lancaster.
Lehigh,	Dr. J. L. Mowery,	New Castle.
Luzerne,	Dr. J. D. Moore,	Lebanon.
Lycoming,	Dr. A. J. Riegel,	Allentown.
McKean,	Dr. J. T. Butz,	Wilkes-Barre.
Mercer,	Dr. Charles H. Miner,	Williamsport.
Mifflin,	Dr. C. W. Youngman,	Bradford.
Monroe,	Dr. W. C. Hogan,*	Bradford.
Montgomery,	Dr. Wade Paton,	Sharon.
Montour,	Dr. P. P. Fisher,	Lewistown.
Northampton,	Dr. C. H. Brisbin,	East Stroudsburg.
Northumberland,	Dr. W. L. Angle,	Norristown.
Perry,	Dr. H. H. Whitcomb,	Danville.
Pike,	Dr. George A. Stock,*	Danville.
Potter,	Dr. Cameron Shultz,	Easton.
Schuylkill,	Dr. Edgar M. Green,	Shamokin.
Snyder,	Dr. R. H. Simmous,	New Bloomfield.
Somerset,	Dr. A. R. Johnston,	Milford.
Sullivan,	Dr. W. B. Kenworthy,	Coudersport.
Susquehanna,	Dr. E. H. Ashcraft,	Pottsville.
Tioga,	Dr. L. T. Kennedy,	Selinsgrove.
Union,	Dr. H. F. Wagenseller,	Meyersdale.
Venango,	Dr. C. P. Large,	Lopez.
Warren,	Dr. J. L. Christian,	Springville.
Washington,	Dr. H. B. Lathrop,	Tioga.
Wayne,	Dr. S. P. Hakes,*	Wellshoro.
Westmoreland,	Dr. C. W. Webb (Acting),	Millburg.
Wysoming,	Dr. G. H. Dimm,	Oil City.
York,	Dr. J. P. Strayer,	Warren.
	Dr. C. H. Schuchel,	Monacaahla.
	Dr. C. B. Wood,	Horsedale.
	Dr. I. B. Nielsen,	Greensburg.
	Dr. I. M. Port-er,	Tunkhannock.
	Dr. H. L. McKown,	York.
	Dr. J. S. Miller,	

†Deceased.

*Resigned.

MEDICAL DEPUTIES*

Name.	Address.	County.
Dr. George C. Bubb,	McKees Rocks,	Allegheny.
Dr. H. O. Mateer,	Ben Avon,	Allegheny.
Dr. W. J. McGearry,	Sharpsburg,	Allegheny.
Dr. G. A. Knight,	Kaylor,	Armstrong.
Dr. C. G. Oyler,	Apollo,	Armstrong.
Dr. Clare B. Kirk,	Everett,	Bedford.
Dr. W. E. Fawcett,	Rainsburg,	Bedford.
Dr. O. W. Berkey,	Bally,	Berks.
Dr. G. W. Fahrenbach,	Beruville,	Berks.
Dr. M. E. Hartman,	Fleetwood,	Berks.
Dr. L. M. Huyette,	Shillington,	Berks.
Dr. A. A. Stamm,	Mohnton,	Berks.
Dr. Lewis R. Tryon,	Centerport,	Berks.
Dr. C. D. Werley,	Topton,	Berks.
Dr. J. A. Zook,	Morgantown,	Berks.
Dr. A. S. Kech,	Altoona,	Blair.
Dr. M. B. Ballard,	Troy,	Bradford.
Dr. George E. Boyer, Jr.,	Troy,	Bradford.
Dr. J. T. Holcomb,	Athens,	Bradford.
Dr. F. L. Inslie,	LeRaysville,	Bradford.
Dr. H. O. Kingsley,	Burlington,	Bradford.
Dr. A. L. Parks,	Rome,	Bradford.
Dr. G. H. B. Terry,	Wyalusing,	Bradford.
Dr. J. C. Tripp,	Warren Center,	Bradford.
Dr. J. L. Christie,	Connoquenessing,	Butler.
Dr. W. J. Grossman,	Butler,	Butler.
Dr. J. F. Schofield,	Portage,	Cambria.
Dr. H. E. Hersch,	Palmerton,	Carbon.
Dr. W. M. Riley,	Kennett Square,	Chester.
Dr. J. T. Taylor,	Pomeroy,	Chester.
Dr. G. W. Clark,	Shippensville,	Clarion.
Dr. C. E. Huston,	Knox,	Clarion.
Dr. F. P. Phillips,	Clarion,	Clarion.
Dr. J. J. McDonald,	Ansonville,	Clearfield.
Dr. A. V. Carl,	Numidia,	Columbia.
Dr. R. O. Davis,	Berwick,	Columbia.
Dr. J. C. Wintersteen,	Numidia,	Columbia.
Dr. W. E. Hyskell,	Meadville,	Crawford.
Dr. E. K. LeFever,	Boiling Springs,	Cumberland.
Dr. J. M. MacMullin,	Harrisburg,	Dauphin.
Dr. J. W. Neff,	Enders,	Dauphin.
Dr. J. S. Eynon,	Chester,	Delaware.
Dr. M. A. Neufeld,	Chester,	Delaware.
Dr. D. W. Thomas,	Force,	Elk.
Dr. J. C. Douville,	North East,	Erie.
Dr. J. L. Cochran,	Star Junction,	Fayette.
Dr. C. R. Lakel,	Fayette City,	Fayette.
Dr. W. C. Schultz,	Waynesboro,	Franklin.
Dr. E. H. Green,	Mill Creek,	Huntingdon.
Dr. J. M. Keichline,	Petersburg,	Huntingdon.
Dr. H. E. Miller,	McAlevys Port,	Huntingdon.
Dr. H. C. Wilson,	Warriors Mark,	Huntingdon.
Dr. C. Paul Reed,	Homer City,	Indiana.
Dr. J. P. Bottenhorn,	Sigel,	Jefferson.
Dr. C. G. H. Frew,	Paradise,	Lancaster.
Dr. W. J. Leaman,	Leaman Place,	Lancaster.
Dr. W. J. Steward,	Lancaster,	Lancaster.

MEDICAL DEPUTIES—Continued.

Name.	Address.	County.
Dr. Samuel Warner,	New Castle,	Lawrence.
Dr. H. M. Keller,	Hazleton,	Luzerne.
Dr. R. A. Koops,	Conyngham,	Luzerne.
Dr. E. S. Rumbel,	Conyngham,	Luzerne.
Dr. C. W. Tressler,	Shickshinny,	Luzerne.
Dr. W. H. Eddy,	Bradford,	McKean.
Dr. C. H. Stockie,	Ludlow,	McKean.
Dr. H. C. Winslow,	Norwich,	McKean.
Dr. R. L. Young,	Ludlow,	McKean.
Dr. I. O. Mahr,	Newton Hamilton,	Mifflin.
Dr. E. F. Benner,	Salfordville,	Montgomery.
Dr. W. B. Jameson,	Jenkintown,	Montgomery.
Dr. J. F. Miller,	Stroudsburg,	Monroe.
Dr. W. F. Satchel,	Effort,	Monroe.
Dr. F. J. Hahn,	Bath,	Northampton.
Dr. J. J. Mazza,	Bangor,	Northampton.
Dr. S. B. Gelse,	Sunbury,	Northumberland.
Dr. J. F. Bryson,	Girardville,	Schuylkill.
Dr. A. B. Fleming,	Tamaqua,	Schuylkill.
Dr. J. B. Heller,	Pottsville,	Schuylkill.
Dr. W. Lebo,	Valley View,	Schuylkill.
Dr. J. A. Longo,	Shepton,	Schuylkill.
Dr. A. S. Ryland,	Valley View,	Schuylkill.
Dr. J. W. Schults,	Tremont,	Schuylkill.
Dr. H. H. Stewart,	Friedensburg,	Schuylkill.
Dr. C. V. Wadlinger,	Port Carbon,	Schuylkill.
Dr. F. J. Walter,	Pine Grove,	Schuylkill.
Dr. J. L. Warne,	Pottsville,	Schuylkill.
Dr. H. M. Wasley,	Shenandoah,	Schuylkill.
Dr. E. E. Wiesner,	Tamaqua,	Schuylkill.
Dr. W. W. Longacre,	Mt. Pleasant Mills,	Snyder.
Dr. C. R. Blttner,	Eddie,	Somerset.
Dr. A. M. Lichty,	Elk Lick,	Somerset.
Dr. H. M. Fry,	Rush,	Susquehanna.
Dr. H. S. Hooven,	Harford,	Susquehanna.
Dr. C. A. Johnston,	Harford,	Susquehanna.
Dr. W. E. Park,	New Milford,	Susquehanna.
Dr. J. G. Wilson,	Montrose,	Susquehanna.
Dr. C. J. Bingaman,	Leetonia,	Tioga.
Dr. J. M. Gentry,	Wellsboro,	Tioga.
Dr. H. W. Howland,	Gaines,	Tioga.
Dr. W. G. Stroble,	Liberty,	Tioga.
Dr. A. M. Brown,	Franklin,	Venango.
Dr. P. L. Brunner,	Cranberry,	Venango.
Dr. C. E. Imbrle,	Clintonsville,	Venango.
Dr. S. W. McDowell,	Pittsville,	Venango.
Dr. O. Appley,	Damascus,	Wayne.
Dr. J. E. Bennett,	Starrucca,	Wayne.
Dr. F. A. Lobbe,	Hawley,	Wayne.
Dr. O. J. Mullin,	Hamlin,	Wayne.
Dr. W. L. Fennel,	Salina,	Westmoreland.
Dr. G. H. Rauch,	Noxen,	Wyoming.

*Persons deputized from time to time by the County Medical Inspectors to act for them in some special investigation.

RAILROAD MEDICAL INSPECTORS.

(Commissioned by the Commissioner of Health but not paid by the State.)

Pennsylvania Railroad Company.

Dr. S. W. Latta, Chief Medical Examiner, Philadelphia.

Dr. A. D. VanDyke, Philadelphia.	Dr. H. W. Pownall, Tyrone.
*Dr. J. M. Wells, Trenton, N. J.	Dr. W. B. Diefenderfer, Altoona.
Dr. J. L. Bower, Philadelphia.	Dr. W. G. McKinney, Cresson.
*Dr. J. D. Shall, Baltimore, Md.	Dr. C. B. Banks, Derry.
Dr. D. W. Nead, Reading.	Dr. D. M. Easter, Youngwood.
Dr. J. B. Lincoln, Columbia.	Dr. W. K. T. Sahn, Pittsburgh
Dr. S. M. Crawford, Harrisburg.	Dr. J. H. Hileman, Pitcairn.
Dr. A. T. Poffenberger, Sunbury	Dr. I. H. Boyd, Oil City.
Dr. G. C. Troutman, Williamsport.	*Dr. J. B. Grier, Olean, N. Y.
Dr. W. G. Morehouse, Renovo	*Dr. A. R. Johnson, Buffalo, N. Y.
Dr. R. H. Wright, Erie.	Dr. H. E. Westhaeffer, Elrama.
Dr. R. H. Moore, Huntingdon.	

Philadelphia and Reading Railway Company.

Dr. Caspar Morris, Chief Medical Examiner, Philadelphia.

Dr. Frederick E. Brister, New Britain.	Dr. J. Henry Orff, Philadelphia.
Dr. Francis S. Ferris, Philadelphia.	Dr. Thomas F. Heebner, Port Carbon.
Dr. Norris S. McDowell, Philadelphia.	Dr. Albert E. Bronson, Girardville.
Dr. Charles F. Detweiler, Reading.	Dr. Harry E. Klase, Harrisburg.

Baltimore and Ohio Railroad Company.

*Dr. J. F. Tearney, Chief Medical Examiner, Baltimore, Md.

*Dr. E. V. Milholland, Assistant to Chief Medical Examiner, Baltimore, Md.

Dr. C. W. Pence, Philadelphia.	Dr. H. H. McIntire, Connellsville.
Dr. F. H. D. Biser, Rockwood.	Dr. J. P. Lawlor, Pittsburgh.
Dr. Roy C. Potter, Rockwood.	Dr. R. J. Gasslein, Pittsburgh.
Dr. M. H. Koehler, Connellsville.	Dr. E. M. Parlett, New Castle Junction.

*District Extends Into Pennsylvania.

TOWNSHIP HEALTH OFFICERS.

*Retired.

†New Appointment.

‡Deceased.

Health Officer.	Residence.	County.
J. J. Kohl,	Orrtanna,	Adams.
Charles Adelsperger,	Aspers,	Adams.
John H. Delp,	York Springs,	Adams.
H. V. Rahn,	Abbottstown,	Adams.
D. C. Krise,*	McSherrystown,	Adams.
T. O. Gouker,	Littlestown,	Adams.
C. B. Hoffman,*	Gettysburg,	Adams.
J. H. Pecher,	Fairfield,	Adams.
Daniel Mummert,	East Berlin,	Adams.
J. Chester Bell,†	Gettysburg,	Adams.
William H. Fischer,	Sharpsburg,	Allegheny.
William J. McLaughlin,	Unity Station,	Allegheny.
Ralph T. Pittock,	Pittsburgh,	Allegheny.
J. H. Rath,	Gallatin,	Allegheny.
W. P. Andre,	Elizabeth,	Allegheny.
J. M. Edmundson,	Carnegie,	Allegheny.
J. R. McMichael,	Oakdale,	Allegheny.

Township Health Officers—Cont'd.

Health Officer.	Residence.	County.
John G. Yolton,	Cliff Mine,	Allegheny.
M. C. Shubert,	McKees Rocks,	Allegheny.
C. M. Timblin,	Bridgeville,	Allegheny.
J. H. D. Gray,	Sewickley,	Allegheny.
Richard Titterington,*	Clairton,	Allegheny.
J. C. Dunn,	Clairton,	Allegheny.
George W. Bell,	Sharpsburg,	Allegheny.
G. C. Magill,	Harmarville,	Allegheny.
George Plscher,	Bakerstown,	Allegheny.
C. H. Kretzer,	Allison Park,	Allegheny.
F. L. Fonger,	Pittsburgh,	Allegheny.
George W. Rush,	Turtle Creek,	Allegheny.
William Plscher,†	Broughton,	Allegheny.
J. F. Swigart,	Kittanning,	Armstrong.
Will A. Wray,	Spring Church,	Armstrong.
J. C. Moore,	Rural Valley,	Armstrong.
Frank Sanders,	New Bethlehem,	Armstrong.
W. A. Jack,	Kittanning, R. D. No. 5,	Armstrong.
S. H. McNaughton,	Parkers Landing,	Armstrong.
J. A. Foreman,	Dayton,	Armstrong.
W. H. Eynon,	Kaylor,	Armstrong.
W. E. Faine,	Tidal,	Armstrong.
D. E. Wolf,	Kelly Station,	Armstrong.
C. E. Kinnard,	Cochran Mills,	Armstrong.
William H. Lance,	Murdockville (Wash. Co.),	Beaver.
I. H. Laird,	New Sheffield,	Beaver.
Albert Marx,	Industry,	Beaver.
G. H. Young,*	Darlington,	Beaver.
Hiram McKee,	Beaver Falls,	Beaver.
J. Lewis,	New Brighton,	Beaver.
W. Scott Shaffer,	Ambridge,	Beaver.
J. J. Lowery,	Hyndman,	Bedford.
Dr. E. L. Smith,	Schellburg,	Bedford.
W. A. McGregor,	Alum Park,	Bedford.
Charles Wolf,	Cessna,	Bedford.
C. W. Bulger,	Woodbury,	Bedford.
C. Guy Blymyer,	Bedford,	Bedford.
C. W. Thomas,*	Six Mile Run,	Bedford.
Thomas Stally,	Everett,	Bedford.
N. C. Mearkle,	Clearville,	Bedford.
James L. Tanley,†	Defiance,	Bedford.
George Herring,	Fleetwood,	Berks.
Daniel K. Hoch,	Kutztown,	Berks.
J. E. Moyer,	Geigers Mills,	Berks.
Morris Schaefer,	Shillington,	Berks.
Dr. W. H. Seitzinger,	Wernersville,	Berks.
A. L. Kleinginna,	West Leesport,	Berks.
W. H. Lutz,	Berville,	Berks.
John D. Moll,	Berville,	Berks.
Franklin Deitzler,	Mt. Aetna,	Berks.
Morris A. Ernst,	Shoemakersville,	Berks.
D. J. Fraunfelder,	Lenhartsville,	Berks.
J. L. Henne,	Leesport,	Berks.
Morris Spatz,	Jacksonwald,	Berks.
John K. Ludwig,	Centerport,	Berks.
Dr. Daniel McLean,	Douglassville,	Berks.
W. S. Stengel,	Bally,	Berks.
J. W. Schwartz,	Mertztown,	Berks.
M. F. Brownlee,	Tyrone,	Blair.
Frank Garland,	Bellwood,	Blair.
T. G. Herbert,	Altoona,	Blair.
J. Frank Mentzer,	Frankstown,	Blair.
Samuel A. Keller,	Duncansville,	Blair.
William Ickes,	Roaring Spring,	Blair.
Joseph Crissman,	Marlinsburg,	Blair.
J. R. Lytle,	Williamsburg,	Blair.
Daniel Chase,	Gillet,	Bradford.
F. O. Lantz,	Powell,	Bradford.
Delanson Fenner,	Towanda,	Bradford.
Henry Forbes,	Sheshequin,	Bradford.
W. E. Lewis,	Wyalusing,	Bradford.
F. M. Hicks,	Rome,	Bradford.
T. Jefferson Waters,	Towanda, No. 76,	Bradford.
F. H. Woolsey,	New Albany,	Bradford.
Curtis B. Tyrrell,	Athens,	Bradford.
F. B. Mayer,†	Canton,	Bradford.
Fay L. Rose,*	LeRaysville,	Bradford.
L. M. Brink,*	LeRaysville,	Bradford.
J. B. Butler,	Canton,	Bradford.

Township Health Officers—Cont'd.

Health Officer.	Residence.	County.
Cyrus Nagel,	Quakertown,	Bucks.
F. P. Reiter,	Rich Hill,	Bucks.
Thomas H. Biehn,	Perkasie,	Bucks.
Dr. A. F. Myers,	Blooming Glen,	Bucks.
C. D. Barrett,	Doylestown,	Bucks.
Dr. Francis G. Cope,	Upper Black Eddy,	Bucks.
George Milnor,	New Hope,	Bucks.
E. H. Blaker,*	Ivyland,	Bucks.
Henry C. Lovett,	Emille,	Bucks.
F. B. Wist,	Yardley,	Bucks.
William Eyre,*	Newtown,	Bucks.
Henry A. Kolbe,†	Doylestown,	Bucks.
Irvin L. Carr,†	Ivyland,	Bucks.
B. F. Ridge,†	Langhorne,	Bucks.
L. L. Brown,*	Harrisville,	Butler.
J. H. Pizor,	Slippery Rock,	Butler.
H. C. Hindman,	West Sunbury,	Butler.
J. E. Womer,	Parkers Landing (Armstrong Co.),	Butler.
J. F. Harper,	North Washington,	Butler.
Joseph Criswell,	Lyndora,	Butler.
W. D. Hoffman,	Saxonburg,	Butler.
F. B. Magee,†	Harrisville,	Butler.
Dr. George H. Mathiott,	Mars,	Butler.
Dr. D. W. Piedler,	Harmony,	Butler.
Harry Heberling,	Portersville,	Butler.
Joseph Barnhart,*	Chicora,	Butler.
Lee Gaiser,†*	Chicora,	Butler.
Mahlon Berkebile,	Johnstown,	Cambria.
Paul Ferguson,	Gallitzin,	Cambria.
P. E. Hollen,	Fallentimber,	Cambria.
Ellsworth Rowland,	Nant-y-Glo,	Cambria.
Frank D. Heilman,	South Fork,	Cambria.
J. W. Fouch,	Salix,	Cambria.
Dr. J. A. Lynch,	Cresson,	Cambria.
John B. Mayers,	Portage,	Cambria.
D. L. Owens,	Ebensburg,	Cambria.
W. C. Perry,	Chest Springs,	Cambria.
Robert Cowan,	St. Benedict,	Cambria.
Dr. E. T. Ealy,	Barnesboro,	Cambria.
Dr. S. W. Worrell,	Patton,	Cambria.
John Kline,	Nicktown,	Cambria.
H. B. Mutersbough,	Driftwood,	Cameron.
R. R. McQuay,	Emporium,	Cameron.
T. E. Morthimer,†	Lehighton,	Carbon.
P. J. Dougherty,	Palmerton,	Carbon.
A. T. Koch,	Weissport,	Carbon.
J. F. Cole,	Beaver Meadow,	Carbon.
C. J. Kistler,	Weatherly,	Carbon.
W. M. Kleckner,	East Mauch Chunk,	Carbon.
C. H. Hofman,	White Haven (Luzerne Co.),	Carbon.
Daniel Thomas,	East Mauch Chunk,	Carbon.
H. R. Kreidler,†	Lehighton,	Carbon.
S. M. Sankey,	Philipsburg,	Centre.
S. R. Pringle,	Port Matilda,	Centre.
W. D. Port,	Pine Grove Mills,	Centre.
G. M. Cooney,	Spring Mills,	Centre.
J. S. Weaver,	Aaronsburg,	Centre.
Homer Carr,	Milesburg,	Centre.
Dr. W. J. Kurtz,	Howard,	Centre.
W. A. Sickel,	Snow Shoe,	Centre.
Irvin J. Dreese,	Lemont,	Centre.
C. R. McMichael,†	East Downingtown,	Chester.
Elmer Hiestand,	Spring City,	Chester.
Ignatius DeWan,*	Phoenixville,	Chester.
Warren Latschaw,	Anselma,	Chester.
Lewis Miller,	Berwyn,	Chester.
William D. Garrett,	West Chester, R. D. No. 2,	Chester.
S. H. Wickersham,	Unionville,	Chester.
William Evans,	West Grove,	Chester.
Dr. D. A. Stubbs,	Oxford,	Chester.
W. H. Townsend,	Lincoln University,	Chester.
William Hurley,	Parkesburg,	Chester.
T. E. Winkle,	Coatesville,	Chester.
J. H. Baskick,	St. Peters, R. D. No. 3,	Chester.
F. L. Talbot,	St. Peters,	Chester.
Edward J. Davis,†	Phoenixville,	Chester.
Edward E. Scott,*	Toughkenamon,	Chester.
J. E. Baldwin,*	West Chester,	Chester.

Township Health Officers—Cont'd.

Health Officer.	Residence.	County.
C. S. Pyle, †	Toughkenamon,	Chester.
C. H. Oberholser,*	Lionville,	Chester.
E. P. Hershey, †	West Chester,	Chester.
Frank McLaughlin, †	Valley Forge,	Chester.
J. B. Feseemyer,	Fryburg,	Clarion.
Solomon Ruth,	Lamartine,	Clarion.
R. J. Sigworth,	Leeper,	Clarion.
Dr. N. M. Meals,	Callensburg,	Clarion.
Dr. S. A. Brown,	Foxburg,	Clarion.
Anson Beatty,*	Knox,	Clarion.
E. W. Kiser,	Shippenville,	Clarion.
Thomas McLaughlin,	Lucinda,	Clarion.
A. M. Callihan,	Helen Furnace,	Clarion.
M. C. Elder,	Corsica (Jefferson Co.),	Clarion.
Dr. C. E. Sayres,*	Hawthorne,	Clarion.
Dr. G. B. Woods,	Curllsville,	Clarion.
J. O. Lindquist, †	Fairmount City,	Clarion.
F. C. McEwen,	Sligo,	Clarion.
A. J. Rimer,	Rimersburg,	Clarion.
C. C. Mook,	Phillipston,	Clarion.
Dr. J. M. E. Brown,	New Bethlehem,	Clarion.
F. C. Corbett, †	New Bethlehem,	Clarion.
Robert R. Funk,	Munson,	Clearfield.
Max E. Prowell,	Burnside,	Clearfield.
Dr. H. A. Woodside,	Lumber City,	Clearfield.
Dr. J. A. Miller,	Grampian,	Clearfield.
Dr. R. R. Jordan,	DuBois,	Clearfield.
Dr. J. H. Kline,	Penfield,	Clearfield.
M. L. McQuown,	Clearfield,	Clearfield.
P. C. Gates,	Coalport,	Clearfield.
W. P. Harpster,	Houtzdale,	Clearfield.
W. P. Tate, †	Curwensville,	Clearfield.
F. R. Sparling,	Osecola Mills,	Clearfield.
H. G. Jones,	Kylertown,	Clearfield.
E. L. Roussey,	Frenchville,	Clearfield.
James M. Orr,	Mahaffey,	Clearfield.
D. Scott Currin,	Loganton,	Clinton.
J. D. Stoughton,	Lock Haven,	Clinton.
I. T. Hunter,	Mill Hall,	Clinton.
R. C. Sebring,	Lock Haven,	Clinton.
Lewis Pfoutz,	Renovo,	Clinton.
Houston Weidler,	Rauchtown,	Clinton.
C. L. Hireleman,	Benton,	Columbia.
J. S. Cole,*	Millville,	Columbia.
Dr. J. W. Mather,	Berwick,	Columbia.
George P. Ringler,	Bloomsburg,	Columbia.
R. M. Graham,*	Catawissa,	Columbia.
John A. Breisch,	Mainville,	Columbia.
Peter McHale,	Centralia,	Columbia.
Martin Billig,	Numidia,	Columbia.
Charles Brumstetler, †	Millville,	Columbia.
Harry A. Harmar, †	Catawissa,	Columbia.
H. P. Marley,	Cochranon,	Crawford.
George Wade,	Saegertown,	Crawford.
Dr. S. P. Hazen,	Hartstown,	Crawford.
Hayden Peterson,	Atlantic,	Crawford.
J. Taylor Hemphill,	Titusville,	Crawford.
A. L. Squier,	Townsville,	Crawford.
W. L. Reed,	Spartansburg,	Crawford.
Wilbur H. King,	Lincolville,	Crawford.
J. A. Webster,	Saegertown, No. 17,	Crawford.
C. C. Bunger,	Center Road Station,	Crawford.
Dr. H. L. Brush,	Conneaut Lake,	Crawford.
Harry A. Campfield,	Meadville,	Crawford.
W. H. Campfield,	Guys Mills,	Crawford.
W. A. Rupert,	Conneautville,	Crawford.
S. L. Bennett,	Cambridge Springs,	Crawford.
Forest I. Drake,	Blooming Valley,	Crawford.
D. B. Russell,	Shippensburg,	Cumberland.
I. J. Weaver,	Mechanicsburg,	Cumberland.
A. W. Yeats,	Carlisle,	Cumberland.
M. A. Emblek,	Carlisle,	Cumberland.
T. A. Carothers,	Carlisle, R. D. No. 8,	Cumberland.
B. Frank Hutton,	Newville,	Cumberland.
W. C. Creamer,	Shippensburg,	Cumberland.
A. R. Zook,	Mechanicsburg, R. D. No. 2,	Cumberland.

Township Health Officers—Cont'd.

Health Officer.	Residence.	County.
C. D. Waldron,	Halifax,	Dauphin.
J. A. Kambell,	Berrysburg,	Dauphin.
Daniel F. Coleman,	Gratz,	Dauphin.
E. F. Steever,	Wiconisco,	Dauphin.
Thomas G. Lentz,	Elizabethville,	Dauphin.
R. M. Steckley,	Dauphin,	Dauphin.
A. B. Croll,	Middletown,	Dauphin.
G. S. Hetrick,	Penbrook,	Dauphin.
John Allwine, †	Hershey,	Dauphin.
Thomas McComb,	Chester,	Delaware.
W. A. Moorhead,	Rutledge,	Delaware.
F. I. Taylor,	Media,	Delaware.
L. D. Speakman,*	Brandywine Summit,	Delaware.
Lewis P. Cox, †	Boothwyn, R. D. No. 2,	Delaware.
John McBride, ‡	St. Marys,	Elk.
D. A. Sheely,	Carlo,	Elk.
Joseph F. Metts,	Hallton,	Elk.
George Younger, Sr.,	Johnsonburg,	Elk.
A. S. Guinac,	Ridgway,	Elk.
A. S. Horton,	Brockport,	Elk.
E. H. Morey,	Benezette,	Elk.
Henry McCray,	Corry,	Erie.
Robert M. Buck,	Union City,	Erie.
C. E. Fish,	Waterford,	Erie.
E. L. Dunn,	McKeam,	Erie.
Thomas Hurst,	Albion,	Erie.
A. H. Nason,	North Girard,	Erie.
J. E. Burton,	Erie, Buffalo Road,	Erie.
Lewis Ward,	North East, R. D. No. 4,	Erie.
Karl Van Tassel,	Union City,	Erie.
Casper Haut,	Star Junction,	Fayette.
S. B. Steepest,	Fayette City,	Fayette.
W. L. Townsend,	Grindstone,	Fayette.
Frank Costello,	Guyaux,	Fayette.
A. M. Provance,	Hopwood,	Fayette.
Allen Hyatt,	Connellsville,	Fayette.
Arthur C. Duun,	Vanderbilt,	Fayette.
N. E. Hall,	Normalville,	Fayette.
W. G. Corristan,	Ohioyle,	Fayette.
Joseph H. Humberston,	Humberston,	Fayette.
J. G. Hager,	Farmington,	Fayette.
John W. Hostetler,	McClellandtown,	Fayette.
Guy Van Horn,	Clarrington,	Forest.
R. L. Haslet,	Tionesta,	Forest.
James I. Woods,	Marienville,	Forest.
C. H. Wilton, ‡	Marienville,	Forest.
H. F. Hummelbaugh,	Mercersburg,	Franklin.
C. Fred Fletcher,	Greencastle,	Franklin.
Percy H. Snowberger,	Waynesboro,	Franklin.
W. E. Finney,	Chambersburg,	Franklin.
W. H. Markey,	Fannettsburg,	Franklin.
W. I. Shearer,	Orrstown,	Franklin.
C. E. Seville,	McConnellsburg,	Fulton.
Harry L. Peck,	Needmore,	Fulton.
J. V. Deaver,	Hiram,	Fulton.
M. E. Barton,	Crystal Spring,	Fulton.
J. A. Virgin,	Clarksville,	Greene.
J. Edgar Bailly,*	Carmichaels,	Greene.
Dr. G. W. Hatfield,	Mt. Morris,	Greene.
Dr. Charles Spragg,	Waynesburg,	Greene.
John L. Rice,	New Freeport,	Greene.
L. B. Donham,*	Greensboro,	Greene.
J. S. Johnson,	Wind Ridge,	Greene.
Jones Stevenson, †	Greensboro,	Greene.
E. F. Gould,	Dudley,	Huntingdon.
Harvey A. Wible,	Selea,	Huntingdon.
W. T. Bair,	Shade Gap,	Huntingdon.
J. M. Lutz,	Shirleysburg,	Huntingdon.
R. P. Smith,	Mapleton,	Huntingdon.
Dr. J. G. Spangler,	Mapleton,	Huntingdon.
D. B. Querry,	Entrilken,	Huntingdon.
A. P. McElwain,	Huntingdon, R. D.,	Huntingdon.
I. C. Temple,	Petersburg,	Huntingdon.
J. E. Irvin,	McAleveys Fort,	Huntingdon.
H. R. Householder,	Grafton, R. D.,	Huntingdon.
D. J. Kyle,	Charter Oak,	Huntingdon.
J. R. Lehman,	Warriors Mark,	Huntingdon.

Township Health Officers—Cont'd.

Health Officer.	Residence.	County.
Frank Ferra,*	Rossiter,	Indiana.
Adam Black,	Smicksburg,	Indiana.
W. S. Brown,	Marion Centre,	Indiana.
Henry Barkey,	Glen Campbell,	Indiana.
Dr. J. H. Peterman,	Cherrytree,	Indiana.
J. W. Thompson,*	Indiana,	Indiana.
James Kinter,	Shelbota,	Indiana.
Dr. W. L. Shields,	Kent,	Indiana.
Calvin Miller,	Saltsburg,	Indiana.
Dr. E. M. Bushnell,	Black Lick,	Indiana.
J. F. Fox,*	Homer City,	Indiana.
Frank C. Auond,	Clymer,	Indiana.
Dr. J. C. Gourley,*	Helwood,	Indiana.
S. L. Alexander,	New Florence,	Indiana.
C. L. McCurdy,	Creokside,	Indiana.
W. C. Cunningham,	Brush Valley,	Indiana.
C. R. Masters,†	Rossiter,	Indiana.
R. G. Spence,†	Homer City,	Indiana.
W. N. Timblin,†	Indiana,	Indiana.
James Ball,†*	Rossiter,	Indiana.
C. M. Leach,*	Rathmel,	Jefferson.
R. N. Calhoun,	Big Run,	Jefferson.
M. I. Kunselman,	Coolspring,	Jefferson.
Alfred Frampton,	Punxsutawney,	Jefferson.
Samuel Shilling,	Ringgold,	Jefferson.
James W. Kyle,	Corsica,	Jefferson.
W. D. Steele,*	Sigel,	Jefferson.
Dr. J. G. Steiner,	Knoxdale,	Jefferson.
I. B. McLaughlin,	Summerville,	Jefferson.
G. W. Nelson,	Brockwayville,	Jefferson.
F. H. Schaffner,	Pueblo,	Jefferson.
Frank Murray,†	Reynoldsville,	Jefferson.
W. J. Park,*†	Sigel,	Jefferson.
J. S. Harley,	Thompsontown,	Juniata.
O. C. Diffenderfer,	Millintown,	Juniata.
J. P. Calhoun,	Millin,	Juniata.
D. G. Alter,	Port Royal,	Juniata.
H. W. Musser,	East Waterford,	Juniata.
Joshua B. Buchanan,	Blacklog,	Juniata.
J. F. Lcoe,	Ransom,	Lackawanna.
T. E. Schilling,	Clark's Summit,	Lackawanna.
M. E. Gallagher,	Carbondale,	Lackawanna.
Dr. G. Philip Saxer,	Fleetville,	Lackawanna.
Henry C. Hoffman,	Wimmers, R. D. No. 1,	Lackawanna.
Eugene Noack,	Moscow,	Lackawanna.
James McCarty,	Gouldsboro,	Lackawanna.
Jacob D. Weigand,	Elizabethtown,	Lancaster.
W. M. Sharley,*	Ephrata,	Lancaster.
H. B. Slack,	Intercourse,	Lancaster.
J. H. Deen,	Lancaster,	Lancaster.
Charles H. Kreider,	Conestoga,	Lancaster.
B. H. Pownall,	Christiana,	Lancaster.
Dr. W. S. Tinney,	Strasburg,	Lancaster.
Heber M. James,	Quarryville,	Lancaster.
S. C. Groff,	Quarryville, R. D.,	Lancaster.
Wakeman Wesley,	Oak Hill,	Lancaster.
Henry Windolph,	Marietta,	Lancaster.
Dr. R. S. Schweitzer,	Adamstown,	Lancaster.
H. B. Clepper,	Columbia,	Lancaster.
Jere Mumma,	Brownstown,	Lancaster.
George D. C. Danner,	Manhelm,	Lancaster.
H. W. Gier,†	Ephrata,	Lancaster.
F. D. Allen,	Wampum,	Lawrence.
Andrew Glasser,	Ellwood City,	Lawrence.
J. A. Magec,	Volant,	Lawrence.
Mehard Neal,	New Wilmington,	Lawrence.
Harry L. Torrance,	Pulaski,	Lawrence.
E. N. Houk,	New Castle, R. D. No. 1,	Lawrence.
S. W. Wilson,	New Galilee, R. D. No. 3,	Lawrence.
A. S. Moore,	New Castle,	Lawrence.
J. C. Bright,	Moravia,	Lawrence.
L. H. Hawthorne,	New Castle, 52 Valley Way,	Lawrence.
George S. Trafford,*	Lebanon,	Lebanon.
John Walter,	Annyville,	Lebanon.
William H. Hinterleiter,	Jonestown,	Lebanon.
E. G. Withers,*	Palmyra,	Lebanon.
Wesley G. Eberiel,	Myerstown,	Lebanon.
Robert A. Brandt,†	Lebanon,	Lebanon.
Jacob J. Snyder,†	Palmyra,	Lebanon.

Township Health Officers—Cont'd.

Health Officer.	Residence.	County.
Samuel A. Sowden,	Slatedale,	Lehigh.
B. J. Schlosser, †	Schnecksville,	Lehigh.
Worden F. Fritzliger,	New Tripoli,	Lehigh.
P. F. Brown, †	Allentown,	Lehigh.
B. F. Sell,	East Texas,	Lehigh.
E. G. Erney,	Limeport,	Lehigh.
John F. L. Shiffert,	Old Zionsville,	Lehigh.
Harrison P. Sterner, †	Allentown,	Lehigh.
J. H. Seybert,	West Nanticoke,	Luzerne.
G. B. Shonk,	Plymouth,	Luzerne.
R. H. Smith,	Sybertsville,	Luzerne.
Paul G. Frey,	Nescopeck,	Luzerne.
M. F. Whitebread,	Wapwallopen,	Luzerne.
James Collins,	Hazleton,	Luzerne.
W. L. Richards,	Drums,	Luzerne.
Henry Deisenroth, †	Freeland,	Luzerne.
H. F. Good,	Wapwallopen,	Luzerne.
Adam Knies,	Mountain Top,	Luzerne.
W. R. Wiant,	Shickshinny,	Luzerne.
Thomas McCormick,	Plains,	Luzerne.
John McLean,	Pittston,	Luzerne.
Dr. P. F. Hubler,	West Pittston,	Luzerne.
D. E. Thomas,	Luzerne,	Luzerne.
Charles D. Huff,	Idetown,	Luzerne.
Harry L. Fisher, * †	Sandy Run,	Luzerne.
John Boyer,	Trivoli,	Lycoming.
Roy G. Lauer,	Muncy,	Lycoming.
Dr. W. E. Delaney, *	Slate Run,	Lycoming.
Dr. J. L. Mansuy,	Ralston,	Lycoming.
Thomas F. Connelly,	Trout Run,	Lycoming.
C. B. Seely,	Jersey Shore,	Lycoming.
Harry Harman,	Montgomery,	Lycoming.
G. O. Gray,	Hughesville,	Lycoming.
Henry Coder,	Montoursville,	Lycoming.
Dr. Charles Youngman,	Williamsport,	Lycoming.
M. E. Wescott, *	Slate Run,	Lycoming.
C. M. Benson,	Colegrove,	McKean.
William Roedel,	Bradford,	McKean.
William A. Connely,	Ludlow,	McKean.
Fred Falkenberg,	Mt. Jewett,	McKean.
C. W. Bishop,	Port Allegany,	McKean.
Dr. W. A. Ostrander,	Smethport,	McKean.
W. A. Harler,	Eldred,	McKean.
James S. Achre, *	Mercer,	Mercer.
J. R. Davidson,	Grove City,	Mercer.
H. B. Moats,	Jamestown,	Mercer.
G. B. Nevin,	Greenville,	Mercer.
R. I. Campbell,	Kennard,	Mercer.
R. D. Kerr,	Sandy Lake,	Mercer.
R. A. Fowler,	Sandy Lake, R. D.,	Mercer.
Paul L. Moore,	Sandy Lake,	Mercer.
J. H. McCurdy,	Jackson Centre,	Mercer.
V. B. Knapp,	Predonia,	Mercer.
Samuel Kerr,	Sharon,	Mercer.
W. J. Porter,	Pulaski (Lawrence County),	Mercer.
John L. Bell,	Transfer,	Mercer.
R. W. Fruit, †	Mercer,	Mercer.
A. P. Gillette, * †	Mercer,	Mercer.
George W. McElhone,	Newton Hamilton,	Mifflin.
William J. Burns,	Reedsville,	Mifflin.
S. B. Kiner,	McVeytown,	Mifflin.
Elmer E. Mink,	Burnham,	Mifflin.
James A. Bigelow, *	Belleville,	Mifflin.
W. F. Bigelow, †	Belleville,	Mifflin.
A. H. Schoonover,	Stroudsburg,	Monroe.
Allen Shupp,	Gilbert,	Monroe.
B. H. Randall, †	Mount Pocono,	Monroe.
George T. Smith, *	Mount Pocono,	Monroe.
Floyd Wagner, * †	Mount Pocono,	Monroe.
Romanus H. Alderfer,	Telford,	Montgomery.
Willis D. Bare,	Bridgeport,	Montgomery.
Arthur R. Hayden,	Ambler,	Montgomery.
Thomas A. Smith,	Red Hill,	Montgomery.
J. W. S. Gross,	Trappe,	Montgomery.
Carl G. Lorenz,	Plymouth Meeting,	Montgomery.
W. R. Walton,	Willow Grove,	Montgomery.

Township Health Officers—Cont'd.

Health Officer.	Residence.	County.
C. E. White,	Norristown,	Montgomery.
Edwin J. Kuhns,	Lausdale,	Montgomery.
Clymer Messimer,	Pottstown,	Montgomery.
A. B. Bernhardt,	Greenlane,	Montgomery.
J. P. Patton,	Danville,	Montour.
A. A. Awitzer,	Washingtonville,	Montour.
W. C. Robbins,	Pottsgrove (Northumberland Co.), ..	Montour.
Milton Huston,†	Portland,	Northampton.
E. P. Wirebach,†	Portland,	Northampton.
William E. Kenumerer,	Easton,	Northampton.
Charles S. Kieblein,	Easton, R. D. No. 6,	Northampton.
Hiram W. Laubach,	Bethlehem,	Northampton.
L. A. Siegfried,	Bath,	Northampton.
Christian Mann,	Bangor,	Northampton.
Frank Wunderly,	Nazareth,	Northampton.
William A. Lynn,	South Bethlehem,	Northampton.
R. B. Bird,	Riverside,	Northumberland.
Stanley Ryan,	Northumberland,	Northumberland.
Harry C. Fasold,	Sunbury,	Northumberland.
Joseph R. Lynn,	Elysburg,	Northumberland.
Thomas Noble,	Mt. Carmel,	Northumberland.
F. S. Fenstermacher,	Dalmatia,	Northumberland.
Roscoe Blain,	Turbotville,	Northumberland.
Thomas Mort,	Trevorton,	Northumberland.
Ralph B. Kell,	Blain,	Perry.
Jacob Morrison,	Landisburg,	Perry.
Roscoe Snyder,	Liverpool,	Perry.
A. R. White,*	Marysville, R. D. No. 1,	Perry.
S. S. Orris,	Duncannon,	Perry.
A. W. Orwan,	Newport, R. D. No. 2,	Perry.
W. E. Meek,	New Buffalo,	Perry.
W. C. Moore,	Millerstown,	Perry.
Jacob Coble,	Newport,	Perry.
Dr. J. B. Baker,	Eshcol,	Perry.
Amos M. Keller,†	Marysville, R. D. No. 1,	Perry.
G. W. Shannon,*	Lackawanna,	Pike.
Martin Hatton,*	Dingman's Ferry,	Pike.
E. C. Wood,	Milford,	Pike.
C. A. Pellett,	Panpac,	Pike.
Isaac Andruss,†	Dingman's Ferry,	Pike.
Henry DeWitt,†	Rowlands,	Pike.
John T. Sinon,	Anstin,	Potter.
C. A. Terhune,	Ulysses,	Potter.
Dr. J. A. Woodward,	Shingle House,	Potter.
D. B. Fessenden,*	Roulette,	Potter.
F. E. Dinehart,	Coudersport,	Potter.
C. H. Francis,	Galeton,	Potter.
E. C. Spencer,	Ulysses,	Potter.
Wilson Russel,	Cross Fork,	Potter.
L. P. Fessenden,†	Roulette,	Potter.
Thomas Devlin,	Cumbola,	Schuylkill.
S. H. Fetter,	Pitman,	Schuylkill.
P. L. Brown,	Anburn,	Schuylkill.
Emanuel Kaufman,	Orwigsburg,	Schuylkill.
J. H. Butz,*	Schuylkill Haven,	Schuylkill.
L. B. Schoek,	Tamaqua,	Schuylkill.
E. P. Hamsber,	Barnesville,	Schuylkill.
Joseph Bruno,	Kelayres,	Schuylkill.
Frank Wharmby,	Nuremberg,	Schuylkill.
James H. Seymour,	Mahanoy City,	Schuylkill.
Thomas H. May,	Shaft,	Schuylkill.
J. J. Conner,	Ashland,	Schuylkill.
Richard Jones,	Minersville,	Schuylkill.
G. I. Derr,	Tremont,	Schuylkill.
Timothy Brennan,	Heckschersville,	Schuylkill.
Ira I. Erdman,	Klingerstown,	Schuylkill.
George Knittle,	New Ringgold,	Schuylkill.
George F. Sheesholtz,*	Tower City,	Schuylkill.
Newton Koppenhaver,*	Valley View,	Schuylkill.
John Sutton,	Pine Grove,	Schuylkill.
Michael J. Kassandra,†	Tamaqua,	Schuylkill.
W. J. Henry,†	Tower City,	Schuylkill.
S. F. Aurand,	Beaver Springs,	Snyder.
Dr. Marand Rothrock,*	Mt. Pleasant Mills,	Snyder.
F. B. Ulrich,	Selinsgrove,	Snyder.
Irvin Boyer,†	Mt. Pleasant Mills,	Snyder.

Township Health Officers—Cont'd.

Health Officer.	Residence.	County.
E. K. Hochstetler,	Sand Patch,	Somerset.
Orville Eike,	Confluence,	Somerset.
H. L. Martz,	Barronvale,	Somerset.
Charles L. Eagle,	Rockwood,	Somerset.
H. F. Fogle,	Elk Lick,	Somerset.
William Long,	Wellersburg,	Somerset.
M. O. Barkley,	Fairhope, R. D. No. 1,	Somerset.
J. H. Hentz,	Berlin,	Somerset.
Calvin Fulton,	Stoyestown,	Somerset.
W. M. Gohn,	Boswell,	Somerset.
Herman F. Swank,	Somerset, R. D. No. 2,	Somerset.
Dr. H. A. Zimmerman,	Hollsopple,	Somerset.
E. C. Shoemaker, ‡	Meyersdale,	Somerset.
J. H. Spence,	Bernice,	Sullivan.
George Brown,	Lopez,	Sullivan.
F. W. Buck,	Muncy Valley,	Sullivan.
J. E. Bird,	Dushore, R. D.,	Sullivan.
William N. Harrison,	Hills Grove,	Sullivan.
Harry Gould,*	Lopez,	Sullivan.
J. L. Miller, †	Lopez,	Sullivan.
F. W. Beebe,*	Susquehanna,	Susquehanna.
C. L. Tyler,	New Milford,	Susquehanna.
Richard Foran,*	Friendsville,	Susquehanna.
Dr. A. S. Blair,	Hallstead,	Susquehanna.
L. B. Whitney,	Thompson,	Susquehanna.
T. B. Dimmick,	Uniondale,	Susquehanna.
J. W. Jones,	Forest City,	Susquehanna.
H. A. Robbins,	Harford,	Susquehanna.
H. S. Conklin,	Montrose,	Susquehanna.
F. S. Greenwood,	Lynn,	Susquehanna.
H. C. Foran, †	Friendsville,	Susquehanna.
Nathan Niles,	Mansfield,	Tioga.
J. W. Stull,*	Tioga,	Tioga.
J. A. Vandergrift,	Wellsboro, R. D. No. 1,	Tioga.
L. G. Austin,	Ogdensburg,	Tioga.
R. G. Heyler,	Liberty,	Tioga.
F. J. Everitt,	Jackson Summit,	Tioga.
John Duff,	Aruot,	Tioga.
E. C. Howell,	Wellsboro, R. D.,	Tioga.
Harry Orr,	Wellsboro, R. D. No. 2,	Tioga.
W. G. Sears,	Gaines,	Tioga.
F. W. Clark,	Mansfield,	Tioga.
William Bennett,	Elkland,	Tioga.
Dr. E. E. Clark,	Knoxville,	Tioga.
G. H. Simmons,	Westfield,	Tioga.
A. Lee Kemp,	Nelson,	Tioga.
Dr. C. S. Jacquemin,	Lewisburg,	Union.
J. A. Spigelmeyer,	Millmont,	Union.
James L. Sanders,	Millburg,	Union.
J. R. McCurley,	Allenwood,	Union.
J. S. McCreight,	Lewisburg,	Union.
A. J. Morrow,	Kennerdell,	Venango.
Roy Plimpton,	Seneca,	Venango.
G. W. Dille,	Cooperstown,	Venango.
Joseph Holtzman,*	Oil City,	Venango.
J. E. Grove,	Franklin,	Venango.
A. E. Singleton,	Utica,	Venango.
Dr. C. P. Snyder,	Polk,	Venango.
J. A. Riddle,	Grove City,	Venango.
J. H. Crawford,	Emlenton,	Venango.
E. D. House,	Pleasantville,	Venango.
Orlo E. Hoop,	Cornplanter,	Warren.
N. R. McQuire,	Columbus,	Warren.
L. G. Henry,	Tidioute,	Warren.
John Spencer,	Chandlers Valley,	Warren.
H. J. Bierce,	Warren,	Warren.
Henry Howard,	Clarendon,	Warren.
William H. Maultby,	Grand Valley,	Warren.
Roy H. McDowell,	Youngsville,	Warren.
W. G. Nease,	Washington,	Washington.
A. L. McConnell,	Florence,	Washington.
Dr. A. L. Runion,	Canonsburg,	Washington.
J. H. Chamberlin,	Finleyville,	Washington.
J. D. Wickerham,	Monongahela,	Washington.
J. A. Carson,	Speers,	Washington.
John G. Lowers,	Elco,	Washington.
Charles E. Willock,	Coal Center, R. D. No. 2,	Washington.
John Hawthorne,	Millsboro,	Washington.
Dr. E. E. French,	Ellsworth,	Washington.

Township Health Officers—Cont'd.

Health Officer.	Residence.	County.
F. H. Condit,	Amity,	Washington.
Dr. R. W. Wolfe,	Taylorstown,	Washington.
J. A. Dickey,	Clayville,	Washington.
J. D. France,	West Middletown,	Washington.
Clarence Bigelow,	Pleasant Mount,	Wayne.
Reuben Lancaster,	South Sterling,	Wayne.
Ralph Gillow,	Equinunk,	Wayne.
Dr. H. C. White,	Arlol,	Wayne.
S. B. Woodmansee,	Lakewood, R. D.,	Wayne.
Dr. S. Amos Ward,	Bethany,	Wayne.
Charles E. Boyd,*	Boyd's Mills,	Wayne.
N. B. Spencer,	Honesdale,	Wayne.
Edgar Tutthill,	Hawley,	Wayne.
W. J. Rose,†	Boyd's Mills,	Wayne.
E. A. Zimmerman,	Lechburg (Armstrong Co.),	Westmoreland.
G. W. Park,*	Parnassus,	Westmoreland.
Charles Gallagher,	Salina,	Westmoreland.
H. A. Waddell,	Dalmont,	Westmoreland.
Ellis Wissinger,	Tunnelton (Indiana Co.),	Westmoreland.
Dr. H. W. Tittle,	New Florence,	Westmoreland.
Dr. L. J. Reese,	Bolivar,	Westmoreland.
W. M. Nicely,	Ligonier,	Westmoreland.
J. Frank Evans,	Ruffsedale,	Westmoreland.
N. E. Rhoads,	Smithton,	Westmoreland.
J. B. White,	Monessen,	Westmoreland.
M. C. Taylor,*	Hermine,	Westmoreland.
C. W. Meerhoff,	Irwin,	Westmoreland.
J. W. Jones,	Greensburg,	Westmoreland.
E. G. Crossland,	Latrobe,	Westmoreland.
H. S. Weister,†	Arnold, R. D. No. 1,	Westmoreland.
G. W. Stough,	Stahlstown,	Westmoreland.
M. R. Conrad,	Nicholson,	Wyoming.
Jonathan Farr,	Meshoppen,	Wyoming.
G. P. Patterson,	Factoryville,	Wyoming.
George O. Shafer,	Falls,	Wyoming.
O. F. Ettwein,	Noxen,	Wyoming.
C. B. Pickett,	Laceyville,	Wyoming.
C. Y. Burch,	Tankhannock,	Wyoming.
W. G. Fulton,	Stewartstown,	York.
W. S. Gotwald,	York,	York.
W. H. Owens,	Dover,	York.
B. Payne Manifold,	Stewartstown, R. D. No. 2,	York.
C. F. Heisler,	Dallastown,	York.
J. E. Wiley,	Delta, R. D. No. 1,	York.
C. K. Weaver,	Dillsburg,	York.
W. S. Young,	East Prospect,	York.
F. Y. Stambaugh,	Hanover,	York.
J. W. Brooks,	Fawn Grove,	York.
Lewis Feistel,	York New Salem,	York.
Jacob A. Stein,	Holtz,	York.
C. G. Ellicker,	Rossville,	York.
J. W. Collins,	Park,	York.
Dr. Frank Horning,	Hallam,	York.
Joseph Shaull,	Felton,	York.
W. S. K. Brown,	Thomasville,	York.
Phares Geiselman,	Jacobus,	York.
Finn Jordan,	Airville,	York.
A. Z. Leib,	East Bernville,	York.
Wilson Rehmeyer,	New Freedom,	York.
John Cockley,	Manchester,	York.
J. H. Shickle,†	Eiters,	York.

SCHOOL MEDICAL INSPECTORS

Name.	Address.	County.
Dr. E. W. Cashman,	York Springs,	Adams.
Dr. Harry Crouse,	Littlestown,	Adams.
Dr. J. R. Dickson,	Gettysburg,	Adams.
Dr. Eugene Elgin,	East Berlin,	Adams.
Dr. J. E. Glenn,	Fairfield,	Adams.
Dr. W. F. Hollinger,	Abbottstown,	Adams.
Dr. D. LeRoy Merriman,	Arendtsville,	Adams.
Dr. George L. Rice,	McSherrystown,	Adams.
Dr. George H. Seaks,	New Oxford,	Adams.
Dr. N. C. Trout,	Fairfield,	Adams.
Dr. William E. Wolf,	Arendtsville,	Adams.
Dr. A. H. Aber,	Dravosburg,	Allegheny.
Dr. W. A. Arnold,	Tarentum,	Allegheny.
Dr. D. A. Atkinson,	Westview,	Allegheny.
Dr. J. M. Boice,	Clinton,	Allegheny.
Dr. J. W. Burkett,	Moon Run,	Allegheny.
Dr. J. S. Cadwalader,	Wexford,	Allegheny.
Dr. A. W. Colcord,	Clairton,	Allegheny.
Dr. W. H. Cooper,	Oakmont,	Allegheny.
Dr. J. S. Crawford,	Ingram,	Allegheny.
Dr. L. C. Creighton,	Unity Station,	Allegheny.
Dr. H. E. Dean,	Braddock,	Allegheny.
Dr. A. H. Eggers,	Pittsburgh,	Allegheny.
Dr. J. W. E. Ellenberger,	Wilkinsburg,	Allegheny.
Dr. W. L. Henderson,	E. McKeesport,	Allegheny.
Dr. E. B. Henry,	Ingomar,	Allegheny.
Dr. A. W. Hopper,	Bridgeville,	Allegheny.
Dr. S. D. Jennings,	Sewickley,	Allegheny.
Dr. R. R. Jones,	Edgewood (Pittsburgh),	Allegheny.
Dr. W. A. Jones,	Hays,	Allegheny.
Dr. William H. Lefler,	McKeesport,	Allegheny.
Dr. E. C. Lewis,	Verona,	Allegheny.
Dr. H. O. Mateer,	Pittsburgh,	Allegheny.
Dr. F. W. Mathewson,	Oakdale,	Allegheny.
Dr. John McAuley,	Bakerstown,	Allegheny.
Dr. J. L. McBride,	Emsworth,	Allegheny.
Dr. W. P. McCulloch,	Cheswick,	Allegheny.
Dr. William J. McGeary,	Sharpsburg, R. D. No. 2,	Allegheny.
Dr. James McNall,	Wilkinsburg,	Allegheny.
Dr. A. A. Peterson,	Elizabeth,	Allegheny.
Dr. J. F. Scott,	Wilson,	Allegheny.
Dr. William Scott,	Coraopolis, R. D. No. 3,	Allegheny.
Dr. C. M. Sease,	Turtle Creek,	Allegheny.
Dr. H. V. Vaught,	Aspinwall,	Allegheny.
Dr. J. C. Welch,	Bellevue,	Allegheny.
Dr. Lewis Willard,	North Side, Pittsburgh,	Allegheny.
Dr. G. R. Wycoff,	McKees Rocks,	Allegheny.
Dr. S. E. Ambrose,	Rural Valley,	Armstrong.
Dr. Thomas L. Aye,	Kelly Station,	Armstrong.
Dr. A. E. Bower,	Ford City,	Armstrong.
Dr. Roscoe Deemar,	Manorville,	Armstrong.
Dr. J. M. Dunkle,	Worthington,	Armstrong.
Dr. W. L. Fennel,	Salina (Westmoreland Co.),	Armstrong.
Dr. E. L. Fleming,	Dayton,	Armstrong.
Dr. T. R. Hillard,	Widnoon,	Armstrong.
Dr. A. M. Hoover,	Parkers Landing,	Armstrong.
Dr. J. A. Kelly,	Whitesburg,	Armstrong.
Dr. G. A. Knight,	Kaylor,	Armstrong.
Dr. B. J. Longwell,	Seminole,	Armstrong.
Dr. J. A. Lowry,	South Bend,	Armstrong.
Dr. T. N. McKee,	Kittanning,	Armstrong.
Dr. C. M. McLaughlin,	Freeport,	Armstrong.
Dr. T. H. Newcome,	Templeton,	Armstrong.
Dr. J. E. Quigley,	Adrian,	Armstrong.
Dr. J. D. Orr,	Lechburg,	Armstrong.
Dr. C. E. Saynes,	Hawthorn (Clarion Co.),	Armstrong.
Dr. E. K. Shumaker,	New Bethlehem (Clarion Co.),	Armstrong.
Dr. A. W. Skilton,	Furnace Run,	Armstrong.
Dr. H. E. Stone,	Kittanning,	Armstrong.
Dr. A. H. Townsend,	Apollo,	Armstrong.
Dr. E. W. Campbell,	Midland,	Beaver.
Dr. A. B. Cloak,	Freedom,	Beaver.
Dr. J. W. Cristler,	Shippingport,	Beaver.
Dr. C. B. Forcey,	Ambridge,	Beaver.
Dr. J. F. Gilliland,	Beaver Falls,	Beaver.
Dr. J. L. Miller,	Aliquippa,	Beaver.

School Medical Inspector—Cont'd.

Name.	Address.	County.
Dr. W. M. Miller,	Hookstown,	Beaver.
Dr. C. B. Moore,	New Galilee,	Beaver.
Dr. D. C. Moore,	Monaca,	Beaver.
Dr. B. C. Painter,	New Brighton,	Beaver.
Dr. Benjamin C. Sawyer,	Darlington,	Beaver.
Dr. B. W. Schaffner,	Ellwood City (Lawrence),	Beaver.
Dr. G. S. Slugert,	Rochester,	Beaver.
Dr. Boyd B. Snodgrass,	Rochester,	Beaver.
Dr. Bruce Snodgrass,	Beaver Falls,	Beaver.
Dr. John D. Stevenson,	Aliquippa,	Beaver.
Dr. William C. Yelton,	Frankfort Springs,	Beaver.
Dr. S. C. Brumbaugh,	Osterburg,	Bedford.
Dr. A. G. Dymond,	New Enterprise,	Bedford.
Dr. W. F. Enfield,	Bedford,	Bedford.
Dr. A. H. Evans,	Saxton,	Bedford.
Dr. W. E. Fawcett,	Rainsburg,	Bedford.
Dr. J. G. Hanks,	Everett,	Bedford.
Dr. Walter de la M. Hill,	Everett,	Bedford.
Dr. B. F. Hunt,	Clearville,	Bedford.
Dr. C. O. Miller,	Saxton,	Bedford.
Dr. D. T. Rees,	Hynduan,	Bedford.
Dr. U. F. Rohm,	Hopewell,	Bedford.
Dr. H. A. Shimer,	Alum Bank,	Bedford.
Dr. H. I. Shoenthal,	New Paris,	Bedford.
Dr. I. C. Stayer,	Woodbury,	Bedford.
Dr. A. Z. Stoner,	Cumberland Valley,	Bedford.
Dr. A. H. Bausher,	Temple,	Berks.
Dr. O. W. Berkey,	Bally,	Berks.
Dr. G. H. Biekel,	Rehrersburg,	Berks.
Dr. H. L. Bollman,	Robesonia,	Berks.
Dr. M. F. Clouser,	Oley,	Berks.
Dr. C. B. Dotterer,	Boyetown,	Berks.
Dr. D. W. Ensminger,	Mt. Aetna,	Berks.
Dr. George W. Fahrenbach,	Bernville,	Berks.
Dr. L. G. Hain,	Shillington,	Berks.
Dr. C. F. Hertzog,	Oley,	Berks.
Dr. George Hetrick,	Birdsboro,	Berks.
Dr. R. W. Lenker,	West Leesport,	Berks.
Dr. C. E. Lerch,	Wyomissing,	Berks.
Dr. F. P. Lytle,	Birdsboro,	Berks.
Dr. F. L. R. Mattern,	Fleetwood,	Berks.
Dr. D. B. McLean,	Dougllassville,	Berks.
Dr. H. U. Miller,	Mt. Penn,	Berks.
Dr. H. E. Morret,	Wernersville,	Berks.
Dr. George F. Pottelger,	Hamburg,	Berks.
Dr. H. L. Quikel,	Boyetown,	Berks.
Dr. H. W. Saul,	Kutztown,	Berks.
Dr. C. E. Schlappich,	Bernville,	Berks.
Dr. A. A. Stamm,	Mohnton,	Berks.
Dr. Henry Stapp,	Womelsdorf,	Berks.
Dr. L. L. Thompson,	Lenhartsville,	Berks.
Dr. J. M. Walborn,	Leesport,	Berks.
Dr. Charles D. Werley,	Topton,	Berks.
Dr. Webster Calvin,	Holidaysburg,	Blair.
Dr. G. F. Dandois,	Martinsburg,	Blair.
Dr. J. L. Gallagher,	Newry,	Blair.
Dr. John B. Mason,	Tyrone,	Blair.
Dr. S. C. Smith,	Holidaysburg,	Blair.
Dr. R. R. Whittaker,	Williamsburg,	Blair.
Dr. T. L. Wilson,	Bellwood,	Blair.
Dr. H. A. Wright,	East Freedom,	Blair.
Dr. M. B. Ballard,	Troy,	Bradford.
Dr. D. L. Bevan,	Leroy,	Bradford.
Dr. A. J. Bird,	Overton,	Bradford.
Dr. W. R. Campbell,	East Smithfield,	Bradford.
Dr. C. M. Coon,	Laquín,	Bradford.
Dr. J. E. Daly,	Ulster,	Bradford.
Dr. A. E. Dann,	Canton,	Bradford.
Dr. W. T. Davison,	Canton,	Bradford.
Dr. Julius Dodd,	Athens,	Bradford.
Dr. H. C. Down,	Wysox,	Bradford.
Dr. J. F. Halaes,	Monroeton,	Bradford.
Dr. W. F. Harshberger,	New Albany,	Bradford.
Dr. F. L. Inslce,	LeRaysville,	Bradford.
Dr. H. O. Kingsley,	Burlington,	Bradford.
Dr. H. D. LaPlant,	Sayre,	Bradford.
Dr. J. C. Lee,	Rummerfield,	Bradford.
Dr. C. S. Means,	Towanda,	Bradford.

School Medical Inspector—Cont'd.

Name.	Address.	County.
Dr. A. L. Parks,	Rome,	Bradford.
Dr. C. L. Stevens,	Athens,	Bradford.
Dr. G. H. B. Terry,	Wyalusing,	Bradford.
Dr. F. A. Thompson,	Towanda,	Bradford.
Dr. Joseph C. Tripp,	Warren Centre,	Bradford.
Dr. A. C. Althouse,	Dublin,	Bucks.
Dr. H. L. Bassett,	Yardley,	Bucks.
Dr. W. H. Brown,	Richlandtown,	Bucks.
Dr. Charles N. Burkhardt,	Chalfont,	Bucks.
Dr. F. G. Cope,	Upper Black Eddy,	Bucks.
Dr. W. S. Erdman,	Buckingham,	Bucks.
Dr. John A. Fell,	Doylestown,	Bucks.
Dr. Horace Fleckenstine,	Newportville,	Bucks.
Dr. A. E. Fretz,	Sellersville,	Bucks.
Dr. J. W. Harper,	Forest Grove,	Bucks.
Dr. I. F. Huff,	Sellersville,	Bucks.
Dr. W. C. LeCompte,	Bristol,	Bucks.
Dr. S. A. Leinbach,	Quakertown,	Bucks.
Dr. Henry Lovett,	Langhorne,	Bucks.
Dr. S. P. McMillhatten,	Ivyland,	Bucks.
Dr. Austin O'Connell,	Bucksville,	Bucks.
Dr. J. J. Ott,	Pleasant Valley,	Bucks.
Dr. G. A. Parker,	Newtown,	Bucks.
Dr. I. Swartz Plymire,	Doylestown,	Bucks.
Dr. E. E. Fownall,	Richboro,	Bucks.
Dr. J. R. Umstead,	Quakertown,	Bucks.
Dr. M. E. Weaver,	Benjamin,	Bucks.
Dr. S. S. P. Wetmore,	Morrisville,	Bucks.
Dr. George M. Beatty,	Chicora,	Butler.
Dr. J. S. Campbell,	Butler,	Butler.
Dr. W. B. Campbell,	Harrisville,	Butler.
Dr. J. L. Christie,	Connoquenessing,	Butler.
Dr. R. B. Elrick,	Petrolia,	Butler.
Dr. H. D. Hockenberry,	West Sunbury,	Butler.
Dr. W. R. Hockenberry,	Slippery Rock,	Butler.
Dr. C. S. Hunter,	West Sunbury,	Butler.
Dr. W. W. Lasher,	Saxonburg,	Butler.
Dr. W. T. Lowry,	North Washington,	Butler.
Dr. George H. Mathiott,	Mars,	Butler.
Dr. S. E. Ralston,	Zellenople,	Butler.
Dr. E. U. Snyder,	Portersville,	Butler.
Dr. V. F. Thomas,	Evans City,	Butler.
Dr. E. C. Thompson,	Slippery Rock,	Butler.
Dr. James B. Thompson,	Prospect,	Butler.
Dr. G. R. Anderson,	Barnesboro,	Cambria.
Dr. A. F. Akers,	Gallitzin,	Cambria.
Dr. J. W. Barr,	Nant-y-Glo,	Cambria.
Dr. A. W. Beatty,	Colver,	Cambria.
Dr. W. A. Blair,	Patton,	Cambria.
Dr. I. C. Blaisdell,	Wilmore,	Cambria.
Dr. A. W. Brinham,	Scalp Level,	Cambria.
Dr. C. C. Custer,	Johnstown,	Cambria.
Dr. H. G. Diferderfer,	Beaverdale,	Cambria.
Dr. A. F. Dunsmore,	Barnesboro,	Cambria.
Dr. L. M. Gurley,	Westmont (Johnstown),	Cambria.
Dr. C. B. Jones,	Summerhill,	Cambria.
Dr. F. C. Jones,	Ebensburg,	Cambria.
Dr. W. O. Keifer,	Frugality,	Cambria.
Dr. J. D. Keiper,	Johnstown,	Cambria.
Dr. E. J. Livingston,	Salix,	Cambria.
Dr. W. W. Livingston,	Dunlo,	Cambria.
Dr. W. O. Lubken,	Johnstown,	Cambria.
Dr. J. A. Lynch,	Cresson,	Cambria.
Dr. W. E. Matthews,	Johnstown,	Cambria.
Dr. J. V. Mulvehill,	Carrolltown,	Cambria.
Dr. H. T. Pridgeaux,	Cresson,	Cambria.
Dr. D. S. Rice,	Hastings,	Cambria.
Dr. C. C. Rush,	Portage,	Cambria.
Dr. J. F. Schofield,	Portage,	Cambria.
Dr. H. H. Somerville,	Chest Springs,	Cambria.
Dr. J. S. Taylor,	Johnstown,	Cambria.
Dr. H. F. Tomb,	Johnstown,	Cambria.
Dr. J. F. Wood,	Barnesboro,	Cambria.
Dr. G. I. Yearick,	Lilly,	Cambria.
Dr. H. S. Falk,	Emporium,	Cameron.
Dr. J. D. Johnston,	Driftwood,	Cameron.
Dr. C. J. Balliett,	Lehighton,	Carbon.
Dr. G. F. Beck,	East Mauch Chunk,	Carbon.
Dr. E. G. Bray,	East Mauch Chunk,	Carbon.
Dr. J. K. Farrar,	Audenreid,	Carbon.

School Medical Inspector—Cont'd.

Name.	Address.	County.
Dr. H. E. Hersch,	Palmerton,	Carbon.
Dr. G. P. Hill,	Lansford,	Carbon.
Dr. P. M. Hunslecker,	Beaver Meadows,	Carbon.
Dr. O. J. Kingsburg,	Nesquehoning,	Carbon.
Dr. W. L. Kutz,	Weissport,	Carbon.
Dr. J. A. Trexler,	Lehighton,	Carbon.
Dr. J. R. G. Allison,	Center Hall,	Centre.
Dr. S. G. Coons,	Stormstown,	Centre.
Dr. J. V. Foster,	State College,	Centre.
Dr. J. A. Hardenbergh,	Millhelm,	Centre.
Dr. Edward H. Harris,	Snow Shoe,	Centre.
Dr. S. M. Huff,	Bellefonte,	Centre.
Dr. W. J. Irwin,	Fleming,	Centre.
Dr. W. J. Kurtz,	Howard,	Centre.
Dr. P. H. Shelley,	Pleasant Gap,	Centre.
Dr. H. H. Thompson,	Phillipsburg,	Centre.
Dr. J. A. Thompson,	Port Matilda,	Centre.
Dr. T. G. Alken,	Berwyn,	Chester.
Dr. C. L. Barry,	Oxford,	Chester.
Dr. A. W. Bangh,	Paoli,	Chester.
Dr. W. W. Betts,	Chadds Ford (Delaware Co.),	Chester.
Dr. J. H. Burkartmaier,	Avondale,	Chester.
Dr. W. F. Cassell,	Spring City,	Chester.
Dr. D. E. Hutchinison,	East Downingtown,	Chester.
Dr. O. J. Kleran,	Unionville,	Chester.
Dr. David Mackey,	Oxford,	Chester.
Dr. J. R. Maxwell,	Parkesburg,	Chester.
Dr. H. Y. Pennell,	East Downingtown,	Chester.
Dr. C. S. Reynolds,	Kennett Square,	Chester.
Dr. Joseph Scattergood,	West Chester,	Chester.
Dr. S. H. Scott,	Coatesville,	Chester.
Dr. Jackson Taylor,	Coatesville,	Chester.
Dr. J. R. Bangert,	Shippenville,	Clarion.
Dr. J. M. E. Brown,	New Bethlehem,	Clarion.
Dr. S. A. Brown,	Foxburg,	Clarion.
Dr. G. W. Clark,	Shippenville,	Clarion.
Dr. C. L. Clover,	Knox,	Clarion.
Dr. J. M. Fitzgerald,	Clarion,	Clarion.
Dr. Robert J. Greer,	East Brady,	Clarion.
Dr. C. V. Hepler,	Hawthorn,	Clarion.
Dr. C. W. Hoffman,	Rimersburg,	Clarion.
Dr. Charles C. Houston,	Knox,	Clarion.
Dr. S. J. Lackey,	Limestone,	Clarion.
Dr. D. L. McAninch,	Lamartine,	Clarion.
Dr. N. M. Meals,	Callensburg,	Clarion.
Dr. John B. Miller,	Sligo,	Clarion.
Dr. F. P. Phillips,	Clarion,	Clarion.
Dr. C. C. Ross,	Clarion,	Clarion.
Dr. C. E. Sayres,	Hawthorn,	Clarion.
Dr. H. B. Summerville,	Rimersburg,	Clarion.
Dr. B. P. Walker,	West Monterey,	Clarion.
Dr. B. G. Wilson,	Clarion,	Clarion.
Dr. G. B. Woods,	Curlsville,	Clarion.
Dr. W. C. Browne,	Burnside,	Clearfield.
Dr. W. S. Bryan,	Ramey,	Clearfield.
Dr. A. D. Cowdrick,	Clearfield,	Clearfield.
Dr. J. A. Dale,	Phillipsburg (Centre Co.),	Clearfield.
Dr. I. S. Fical,	Karthaus,	Clearfield.
Dr. George B. Goheen,	Coalport,	Clearfield.
Dr. F. W. Harper,	Irvona,	Clearfield.
Dr. M. E. Hurd,	Mahaffey,	Clearfield.
Dr. H. H. Lewis,	Penfield,	Clearfield.
Dr. A. C. Lynn,	Osecola Mills,	Clearfield.
Dr. S. M. Martsof,	Westover,	Clearfield.
Dr. G. E. Mank,	Woodland,	Clearfield.
Dr. C. G. McNaul,	Glen Richey,	Clearfield.
Dr. J. A. Miller,	Gramplan,	Clearfield.
Dr. S. J. Miller,	Madera,	Clearfield.
Dr. George A. Ricketts,	Smith Mill,	Clearfield.
Dr. J. P. Rowles,	Mahaffey,	Clearfield.
Dr. I. H. White,	Hontzdale,	Clearfield.
Dr. R. L. Williams,	Hontzdale,	Clearfield.
Dr. H. A. Woodside,	Lumber City,	Clearfield.
Dr. H. L. Woodside,	Bigler,	Clearfield.
Dr. Joseph M. Corson,	Chatham Run,	Clinton.
Dr. C. L. Fullmer,	Renovo,	Clinton.
Dr. Saylor J. McGhee,	Lock Haven,	Clinton.
Dr. I. O. Mahr,	Fogantou,	Clinton.

School Medical Inspector—Cont'd.

Name.	Address.	County.
Dr. G. D. Mervine,	Bitumen,	Clinton.
Dr. A. B. Painter,	Mill Hall,	Clinton.
Dr. T. McD. Tibbens,	Beech Creek,	Clinton.
Dr. William E. Welliver,	Lock Haven,	Clinton.
Dr. S. B. Arment,	Bloomsburg,	Columbia.
Dr. G. E. Follmer,	Orangeville,	Columbia.
Dr. H. G. Fortner,	Centralia,	Columbia.
Dr. J. M. Gemmill,	Millville,	Columbia.
Dr. L. B. Kline,	Catawissa,	Columbia.
Dr. J. R. Montgomery,	Bloomsburg,	Columbia.
Dr. J. E. Patterson,	Benton,	Columbia.
Dr. Ambrose Shuman,	Catawissa,	Columbia.
Dr. I. R. Wolfe,	Espy,	Columbia.
Dr. J. L. Axtell,	Cochranton,	Crawford.
Dr. H. L. Brush,	Conneaut Lake,	Crawford.
Dr. C. W. Burgwin,	Gnys Mills,	Crawford.
Dr. M. C. Carpenter,	Linesville,	Crawford.
Dr. R. W. Clark,	Venango,	Crawford.
Dr. A. W. Clouse,	Geneva,	Crawford.
Dr. H. M. Daniels,	Woodcock,	Crawford.
Dr. A. L. Dennis,	Conneautville,	Crawford.
Dr. S. J. Dickey,	Blooming Valley,	Crawford.
Dr. H. H. Dight,	Titusville,	Crawford.
Dr. George W. Ellison,	Townville,	Crawford.
Dr. W. M. Gamble,	Centerville,	Crawford.
Dr. S. F. Hazen,	Hartstown,	Crawford.
Dr. G. E. Humphrey,	Cambridge Springs,	Crawford.
Dr. F. K. McCune,	Saegertown,	Crawford.
Dr. E. E. Maitland,	Spartansburg,	Crawford.
Dr. D. C. Mock,	Cambridge Springs,	Crawford.
Dr. J. D. Mosier,	Meadville,	Crawford.
Dr. W. H. Quay,	Townville,	Crawford.
Dr. J. K. Roberts,	Meadville,	Crawford.
Dr. W. W. Shaffer,	Cochranton,	Crawford.
Dr. R. S. Smith,	Saegertown,	Crawford.
Dr. C. L. Williams,	Harmonsburg,	Crawford.
Dr. H. B. Bashore,	West Fairview,	Cumberland.
Dr. G. G. Irwin,	Mt. Holly Springs,	Cumberland.
Dr. S. A. Kirkpatrick,	New Cumberland,	Cumberland.
Dr. E. K. Lefever,	Bolling Springs,	Cumberland.
Dr. H. H. Longsdorf,	Dickinson,	Cumberland.
Dr. J. Bruce McCreary,	Shippensburg,	Cumberland.
Dr. S. E. Mowery,	Mechanicsburg,	Cumberland.
Dr. E. C. Neely,	Newville,	Cumberland.
Dr. E. R. Plank,	Carlisle,	Cumberland.
Dr. J. F. Blecher,	Middletown,	Dauphin.
Dr. A. C. Coble,	Dauphin,	Dauphin.
Dr. H. W. George,	Middletown,	Dauphin.
Dr. L. C. Havice,	Berrysburg,	Dauphin.
Dr. M. L. Hershey,	Hershey,	Dauphin.
Dr. D. E. Hottenstein,	Millersburg,	Dauphin.
Dr. C. E. L. Keene,	Harrisburg,	Dauphin.
Dr. W. B. Kirkpatrick,	Highspire,	Dauphin.
Dr. W. E. Lebo,	Gratz,	Dauphin.
Dr. M. D. Lehr,	Lykens,	Dauphin.
Dr. L. S. Marshall,	Halifax,	Dauphin.
Dr. F. T. Romberger,	Elizabethville,	Dauphin.
Dr. H. A. Shaffer,	Williamstown,	Dauphin.
Dr. W. M. Shull,	Hummelstown,	Dauphin.
Dr. A. L. Shope,	Penbrook,	Dauphin.
Dr. H. A. Spencer,	Wiconisco,	Dauphin.
Dr. W. W. Betts,	Chadds Ford,	Delaware.
Dr. E. C. Bullock,	Upland,	Delaware.
Dr. H. C. Dooling,	Norwood Station,	Delaware.
Dr. J. S. Lynon,	Chester,	Delaware.
Dr. S. P. Gray,	Chester,	Delaware.
Dr. E. M. Hary,	Media,	Delaware.
Dr. William F. Moore,	Llanerch,	Delaware.
Dr. M. A. Neufeld,	Chester,	Delaware.
Dr. F. R. Nothnagle,	Chester,	Delaware.
Dr. William H. Price,	Swarthmore,	Delaware.
Dr. J. L. Pyle,	Gradyville,	Delaware.
Dr. V. M. Reynolds,	Darby,	Delaware.
Dr. J. B. Roberts,	Llanerch,	Delaware.
Dr. N. D. Smith,	Rutledge,	Delaware.
Dr. J. C. Starbuck,	Media,	Delaware.
Dr. H. F. Taylor,	Ridley Park,	Delaware.
Dr. J. William Wood,	Chester,	Delaware.

School Medical Inspector—Cont'd.

Name.	Address.	County.
Dr. Stanley Barratt,	Wilcox,	Elk.
Dr. S. E. Hayes,	Byrnedale,	Elk.
Dr. G. M. Hutchison,	Dagus Mines,	Elk.
Dr. A. A. Mullaaupt,	St. Marys,	Elk.
Dr. M. M. Rankin,	Ridgway,	Elk.
Dr. E. B. Sharp,	Johnsonburg,	Elk.
Dr. E. C. Strassly,	Elbon,	Elk.
Dr. D. W. Thomas,	Benezette,	Elk.
Dr. J. C. Douville,	North East,	Erie.
Dr. V. B. Eller,	McKean,	Erie.
Dr. J. W. Fearn,	Wattsburg,	Erie.
Dr. W. E. Geer,	Union City,	Erie.
Dr. M. S. Gillespie,	Edinboro,	Erie.
Dr. F. C. Hart,	Girard,	Erie.
Dr. J. B. Howe,	Erie,	Erie.
Dr. E. E. Kendall,	Waterford,	Erie.
Dr. H. E. Lyons,	Fairview,	Erie.
Dr. J. M. Peters,	Albion,	Erie.
Dr. J. F. Rutherford,	Cranesville,	Erie.
Dr. A. L. Smith,	Corry,	Erie.
Dr. G. P. Spaulding,	Albion,	Erie.
Dr. R. W. Thompson,	Wesleyville,	Erie.
Dr. H. J. Bell,	Dawson,	Fayette.
Dr. D. D. Brooks,	Normalville,	Fayette.
Dr. S. C. Dowds,	Dunbar,	Fayette.
Dr. R. T. Gribble,	Fairchance,	Fayette.
Dr. H. E. Hall,	Vanderbilt,	Fayette.
Dr. G. B. Hansell,	Fayette City,	Fayette.
Dr. F. S. Hoover,	Brownsville,	Fayette.
Dr. E. R. Ingraham,	Masontown,	Fayette.
Dr. C. B. Johnson,	New Salem,	Fayette.
Dr. L. D. Johnson,	Obiopolis,	Fayette.
Dr. J. L. Junk,	Connellsville,	Fayette.
Dr. N. B. Lowman,	Belle Vernon,	Fayette.
Dr. A. McG. Duff,	Republic,	Fayette.
Dr. W. T. Messmore,	Smithfield,	Fayette.
Dr. W. T. Myers,	Markleysburg,	Fayette.
Dr. V. P. Pisula,	Everson,	Fayette.
Dr. George H. Robinson,	Uniontown,	Fayette.
Dr. E. C. Sherrick,	Connellsville,	Fayette.
Dr. A. C. Smith,	South Brownsville,	Fayette.
Dr. J. E. Beck,	Marienville,	Forrest.
Dr. J. J. Brewer,	Clarrington,	Forrest.
Dr. T. J. Bovard,	Tionesta,	Forrest.
Dr. C. Y. Detar,	Kellettville,	Forrest.
Dr. H. M. Fritz,	Quincy,	Franklin.
Dr. W. E. Holland,	Fayetteville,	Franklin.
Dr. J. H. Kiuter,	St. Thomas,	Franklin.
Dr. E. W. Palmer,	Greencastle,	Franklin.
Dr. L. H. Saxe,	Fannettsburg,	Franklin.
Dr. A. B. Sulvely,	Waynesboro,	Franklin.
Dr. M. W. Stofer,	Chambersburg,	Franklin.
Dr. D. F. Unger,	Mercersburg,	Franklin.
Dr. T. D. White,	Orrstown,	Franklin.
Dr. Guy Zimmerman,	Lemasters,	Franklin.
Dr. R. B. Campbell,	New Grenada,	Fulton.
Dr. H. C. McClain,	Hustontown,	Fulton.
Dr. J. M. McKibbin,	Buck Valley,	Fulton.
Dr. J. W. Mosser,	McConnellsburg,	Fulton.
Dr. W. F. Sappington,	Webster Mills,	Fulton.
Dr. B. J. Birch,	Greensboro,	Greene.
Dr. J. A. Coen,	Bristoria,	Greene.
Dr. J. R. Day,	Nineveh,	Greene.
Dr. John W. Grimes,	Waynesburg,	Greene.
Dr. S. H. Jams,	Waynesburg,	Greene.
Dr. Ira D. Knotts,	Daylstown,	Greene.
Dr. L. F. Milliken,	Graysville (P. O. Harveys),	Greene.
Dr. J. M. Murray,	Wind Ridge,	Greene.
Dr. H. C. Rice,	New Freeport,	Greene.
Dr. J. M. Shriver,	Waynesburg,	Greene.
Dr. S. J. Titus,	Jefferson,	Greene.
Dr. J. M. Beck,	Alexandria,	Huntingdon.
Dr. J. P. Brallier,	Alexandria,	Huntingdon.
Dr. O. G. Brumbaugh,	Huntingdon,	Huntingdon.
Dr. R. R. Decker,	Orbisonia,	Huntingdon.
Dr. A. H. Evans,	Saxton (Bedford County),	Huntingdon.
Dr. J. M. Fleming,	Blairs Mills,	Huntingdon.
Dr. H. C. Frontz,	Huntingdon,	Huntingdon.

School Medical Inspector—Cont'd.

Name.	Address.	County.
Dr. E. H. Green,	Mill Creek,	Huntingdon.
Dr. S. F. Gregory,	Mt. Union,	Huntingdon.
Dr. A. J. Hamilton,	Cassville,	Huntingdon.
Dr. G. G. Harman,	Huntingdon,	Huntingdon.
Dr. W. R. Heaton,	ShIPLEYSBURG,	Huntingdon.
Dr. W. W. Heaton,	Saltillo,	Huntingdon.
Dr. B. E. Himes,	Shade Gap,	Huntingdon.
Dr. H. G. Horton,	Three Springs,	Huntingdon.
Dr. J. M. Keichline, Jr.,	Petersburg,	Huntingdon.
Dr. H. V. Locke,	Orbisonia,	Huntingdon.
Dr. C. A. R. McClain,	Mt. Union,	Huntingdon.
Dr. H. B. McGarrath,	Robertsdale,	Huntingdon.
Dr. H. E. Miller,	McAlvey's Fort,	Huntingdon.
Dr. J. G. Spangler,	Mapleton Depot,	Huntingdon.
Dr. W. A. Taylor,	Broad Top,	Huntingdon.
Dr. H. C. Wilson,	Warriors Mark,	Huntingdon.
Dr. R. M. Alexander,	Robinson,	Indiana.
Dr. J. A. Elkin,	Creekside,	Indiana.
Dr. J. G. Fisher,	Plumville,	Indiana.
Dr. J. C. Gourley,	Heilwood,	Indiana.
Dr. W. E. Griffith,	Iselin,	Indiana.
Dr. C. G. Harmon,	West Lebanon,	Indiana.
Dr. William Jones,	Brush Valley,	Indiana.
Dr. S. A. Kamerer,	Smicksburg,	Indiana.
Dr. E. B. Lewis,	Glen Campbell,	Indiana.
Dr. R. N. Lewis,	Livermore (Westmoreland Co.),	Indiana.
Dr. J. S. Miller,	Clymer,	Indiana.
Dr. William H. Nix,	Wehrum,	Indiana.
Dr. R. K. Norton,	Blairsville,	Indiana.
Dr. E. E. Onstott,	Saltsburg,	Indiana.
Dr. James H. Peterman,	Cherrytree,	Indiana.
Dr. C. P. Reed,	Homer City,	Indiana.
Dr. C. E. Rink,	Indiana,	Indiana.
Dr. William J. Salisbury,	Armagh,	Indiana.
Dr. R. E. Schall,	Arcadia,	Indiana.
Dr. E. F. Shaulis,	Indiana,	Indiana.
Dr. W. L. Shields,	Kent,	Indiana.
Dr. C. M. Smith,	Plumville,	Indiana.
Dr. T. D. Stephens,	Penn Run,	Indiana.
Dr. A. H. Stewart,	Marion Centre,	Indiana.
Dr. A. F. Balmer,	Brookville,	Jefferson.
Dr. S. M. Beyer,	Punxsutawney,	Jefferson.
Dr. J. D. Botterhorn,	Sigel,	Jefferson.
Dr. Ira D. Bowser,	Reynoldsville,	Jefferson.
Dr. S. R. Huff,	Hazen,	Jefferson.
Dr. George H. Humphreys,	Brockwayville,	Jefferson.
Dr. A. F. McCormick,	Falls Creek (Clearfield Co.),	Jefferson.
Dr. A. C. McKinley,	Corsica,	Jefferson.
Dr. W. C. Newcome,	Big Run,	Jefferson.
Dr. J. F. Raine,	Sykesville,	Jefferson.
Dr. J. C. Sayers,	Reynoldsville,	Jefferson.
Dr. A. J. Simpson,	Summerville,	Jefferson.
Dr. A. C. Whitehill,	Brookville,	Jefferson.
Dr. W. H. Banks,	Millintown,	Juniata.
Dr. J. W. Deckard,	Richfield,	Juniata.
Dr. W. H. Haines,	Thompsonstown,	Juniata.
Dr. I. G. Headings,	McAllisterville,	Juniata.
Dr. J. G. Heading,	Port Royal,	Juniata.
Dr. B. F. Long,	Millin,	Juniata.
Dr. A. W. Shelly,	Port Royal,	Juniata.
Dr. H. F. Willard,	Mexico,	Juniata.
Dr. H. O. Baldwin,	Dalton,	Lackawanna.
Dr. S. D. Davis,	Jermyn,	Lackawanna.
Dr. G. A. Kerling,	Gouldsboro (Wayne Co.),	Lackawanna.
Dr. W. E. Lloyd,	Forest City (Susquehanna Co.),	Lackawanna.
Dr. S. E. Lynch,	Clarks Summit,	Lackawanna.
Dr. R. B. Mackey,	Waverly,	Lackawanna.
Dr. L. J. Muthart,	Jermyn,	Lackawanna.
Dr. W. H. Newman,	Bald Mount,	Lackawanna.
Dr. W. A. Smythe,	Moosic,	Lackawanna.
Dr. C. A. Zeller,	Dalton,	Lackawanna.
Dr. George E. Day,	Strasburg,	Lancaster.
Dr. B. F. Good,	Letort,	Lancaster.
Dr. A. H. Helm,	New Providence,	Lancaster.
Dr. C. E. Helm,	Bart,	Lancaster.
Dr. J. T. Herr,	Landisville,	Lancaster.
Dr. George B. Hershey,	Gap,	Lancaster.
Dr. J. D. Hershey,	Manheim,	Lancaster.
Dr. W. G. Hess,	Greene,	Lancaster.
Dr. T. S. Irwin,	Christiana,	Lancaster.

School Medical Inspector—Cont'd.

Name.	Address.	County.
Dr. G. C. Kinard,	Lincoln,	Lancaster.
Dr. George W. Kinard,	Leacock,	Lancaster.
Dr. J. R. Lehman,	Mountville,	Lancaster.
Dr. H. A. Long,	Brickerville,	Lancaster.
Dr. D. G. McCaskey,	Witmer,	Lancaster.
Dr. J. L. Mowery,	Lancaster,	Lancaster.
Dr. W. F. Mylin,	Intercourse,	Lancaster.
Dr. J. J. Newpher,	Mount Joy,	Lancaster.
Dr. Richard Reeser,	Columbia,	Lancaster.
Dr. T. M. Rohrer,	Quarryville,	Lancaster.
Dr. L. R. Rothermel,	Denver,	Lancaster.
Dr. R. S. Schweitzer,	Adamstown,	Lancaster.
Dr. J. A. Smith,	Reamstown,	Lancaster.
Dr. J. C. Steever,	Bainbridge,	Lancaster.
Dr. Vere Treichelr,	Elizabethtown,	Lancaster.
Dr. A. V. Walter,	Brownstown,	Lancaster.
Dr. H. Walter,	Rothsville,	Lancaster.
Dr. Paul K. Wentz,	New Holland,	Lancaster.
Dr. J. L. Winters,	Blue Ball,	Lancaster.
Dr. W. C. Autenreith,	Bessemer,	Lawrence.
Dr. H. E. Barr,	New Wilmington,	Lawrence.
Dr. W. D. Cleland,	New Castle,	Lawrence.
Dr. C. M. Iseman,	Ellwood City,	Lawrence.
Dr. E. E. Lamb,	Ellwood City,	Lawrence.
Dr. R. G. Miles,	New Castle,	Lawrence.
Dr. H. C. Mitchell,	Edinburg,	Lawrence.
Dr. J. D. Moore,	New Castle,	Lawrence.
Dr. Benjamin Sawyer,	Darlington (Beaver Co.),	Lawrence.
Dr. L. L. Swogger,	New Bedford,	Lawrence.
Dr. F. F. Urey,	New Castle,	Lawrence.
Dr. E. M. Wagner,	Wampum,	Lawrence.
Dr. Samuel Warner,	New Castle,	Lawrence.
Dr. S. D. Bashore,	Palmyra,	Lebanon.
Dr. H. L. Gerberich,	Lebanon,	Lebanon.
Dr. A. W. Gernert,	Myerstown,	Lebanon.
Dr. Seth A. Light,	Lebanon,	Lebanon.
Dr. D. M. Rank,	Anville,	Lebanon.
Dr. P. D. Reich,	Jonestown,	Lebanon.
Dr. U. G. Risser,	Campbelltown,	Lebanon.
Dr. I. K. Ulrich,	Anville,	Lebanon.
Dr. F. B. Witmer,	Lebanon,	Lebanon.
Dr. H. C. Witmeyer,	Lebanon,	Lebanon.
Dr. F. D. Zimmerman,	Schaeffertown,	Lebanon.
Dr. Levi Zimmerman,	Richland,	Lebanon.
Dr. M. J. Backenstoe,	Emaus,	Lehigh.
Dr. J. T. Butz,	Allentown,	Lehigh.
Dr. H. B. Erdman,	Macungie,	Lehigh.
Dr. W. L. Estes, Jr.,	South Bethlehem,	Lehigh.
Dr. F. H. Long,	Coopersburg,	Lehigh.
Dr. Wallace J. Lowright,	Center Valley,	Lehigh.
Dr. Robert Morgan,	Slatington,	Lehigh.
Dr. C. H. Muschitz,	Slatington,	Lehigh.
Dr. James H. Paul,	Macungie,	Lehigh.
Dr. Clarence C. Rodgers,	Allentown,	Lehigh.
Dr. Ralph T. Sowden,	Slatedale,	Lehigh.
Dr. Alexander Armstrong,	White Haven,	Luzerne.
Dr. E. W. Bixby,	Wilkes-Barre,	Luzerne.
Dr. A. C. Brooks,	Wilkes-Barre,	Luzerne.
Dr. W. C. Dreihelbles,	Wilkes-Barre,	Luzerne.
Dr. J. C. Fleming,	Dallas,	Luzerne.
Dr. Stanley Freeman,	Wilkes-Barre,	Luzerne.
Dr. P. I. Gorman,	Pittston,	Luzerne.
Dr. David Hart,	Wapwallopen,	Luzerne.
Dr. William S. Helman,	Avoca,	Luzerne.
Dr. G. L. Hoffman,	Forty Fort,	Luzerne.
Dr. G. L. Howell,	Trucksville,	Luzerne.
Dr. John Howorth,	Wilkes-Barre,	Luzerne.
Dr. D. A. W. Huebner,	Fern Glen,	Luzerne.
Dr. J. H. Hughes,	Nanticoke,	Luzerne.
Dr. F. J. Kosek,	Wilkes-Barre,	Luzerne.
Dr. P. P. Mayoek,	Wilkes-Barre,	Luzerne.
Dr. A. T. McClintock,	Wilkes-Barre,	Luzerne.
Dr. C. H. Miner,	Wilkes-Barre,	Luzerne.
Dr. H. M. Neale,	Upper Lehigh,	Luzerne.
Dr. D. G. Robinhold,	Forty Fort,	Luzerne.
Dr. M. C. Rumbaugh,	Dorrancceton,	Luzerne.
Dr. B. C. Rumbel,	Corynghan,	Luzerne.
Dr. E. A. Sweeney,	Wilkes-Barre,	Luzerne.
Dr. C. W. Tressler,	Shickshinny,	Luzerne.
Dr. M. J. Van Horn,	Town Hill,	Luzerne.
Dr. R. S. Woehrie,	Miners Mills,	Luzerne.

School Medical Inspector—Cont'd.

Name.	Address.	County.
Dr. R. H. Born,	Montoursville,	Lycoming.
Dr. W. E. Delaney,	Williamsport,	Lycoming.
Dr. J. L. Derr,	Lairdsville,	Lycoming.
Dr. R. B. Hayes,	Jersey Shore,	Lycoming.
Dr. A. P. Hull,	Montgomery,	Lycoming.
Dr. D. E. Kiess,	Hughesville,	Lycoming.
Dr. J. L. Mansuy,	Ralston,	Lycoming.
Dr. Robert Milnor,	Warrens ville,	Lycoming.
Dr. J. E. Schaefer,	Cogan Station,	Lycoming.
Dr. Charles Schneider,	South Williamsport,	Lycoming.
Dr. J. W. Van Horn,	Montoursville,	Lycoming.
Dr. C. D. Voorhees,	Hughesville,	Lycoming.
Dr. A. T. Welker,	Collomsville,	Lycoming.
Dr. T. K. Wood,	Muncy,	Lycoming.
Dr. C. W. Youngman,	Williamsport,	Lycoming.
Dr. H. M. Cleveland,	Mt. Jewett,	McKean.
Dr. A. J. Colcord,	Port Allegany,	McKean.
Dr. W. F. Cook,	Port Allegany,	McKean.
Dr. L. W. Dana,	Kane,	McKean.
Dr. E. M. McLean,	Eldred,	McKean.
Dr. W. S. Moyer,	Rixford,	McKean.
Dr. W. A. Ostrander,	Smethport,	McKean.
Dr. F. W. Paton,	Bradford,	McKean.
Dr. George Bagnall,	Stoneboro,	Mercer.
Dr. Fred Batteiger,	Greenville,	Mercer.
Dr. P. E. Biggins,	Sharpsville,	Mercer.
Dr. C. C. Campman,	West Middlesex,	Mercer.
Dr. J. C. Cooley,	Sandy Lake,	Mercer.
Dr. Ira H. Cotton,	Leesburg,	Mercer.
Dr. J. E. Ferringer,	Stoneboro,	Mercer.
Dr. P. P. Fisher,	Sharon,	Mercer.
Dr. J. D. Hoffman,	Jackson Centre,	Mercer.
Dr. T. F. Hogue,	Fredonia,	Mercer.
Dr. A. I. Hoon,	Mercer,	Mercer.
Dr. Paul T. Hope,	Mercer,	Mercer.
Dr. John Hunter,	West Middlesex,	Mercer.
Dr. Martha E. MacBride,	Grove City,	Mercer.
Dr. C. W. McElhaney,	Greenville,	Mercer.
Dr. B. A. Montgomery,	Grove City,	Mercer.
Dr. D. H. Smith,	Mill Brook,	Mercer.
Dr. C. H. Brislin,	Lewistown,	Mifflin.
Dr. S. M. Hazlett,	Allensville,	Mifflin.
Dr. C. M. Johnson,	McVeytown,	Mifflin.
Dr. C. J. Stambaugh,	Reedsville,	Mifflin.
Dr. B. P. Steele,	McVeytown,	Mifflin.
Dr. W. L. Angle,	East Stroudsburg,	Monroe.
Dr. J. M. DeKay,	Mountainhome,	Monroe.
Dr. George H. Rhoads,	Tobyhanna,	Monroe.
Dr. E. A. Shupp,	Kunkletown,	Monroe.
Dr. J. A. Stotz,	Brodheads ville,	Monroe.
Dr. G. S. Travis,	East Stroudsburg,	Monroe.
Dr. A. A. Wertman,	Tannersville,	Monroe.
Dr. F. B. Allen,	North Wales,	Montgomery.
Dr. H. C. Allen,	Schwenkville,	Montgomery.
Dr. W. Z. Anders,	Trappe,	Montgomery.
Dr. A. N. Baggs,	Abington,	Montgomery.
Dr. S. C. Basney,	Mont Clare,	Montgomery.
Dr. J. W. Bauman,	Lansdale,	Montgomery.
Dr. H. A. Bostock,	Norristown,	Montgomery.
Dr. Frederick Bushong,	Pottstown,	Montgomery.
Dr. A. J. Craig,	Fort Washington,	Montgomery.
Dr. F. E. Donnelly,	Conshohocken,	Montgomery.
Dr. C. T. Farjes,	Narberth,	Montgomery.
Dr. Andrew Godfrey,	Ambler,	Montgomery.
Dr. W. H. Imhoff,	Willow Grove,	Montgomery.
Dr. V. Z. Keeler,	Harleysville,	Montgomery.
Dr. E. G. Kriebel,	Worcester,	Montgomery.
Dr. J. C. Landis,	Pennsburg,	Montgomery.
Dr. D. B. Moyer,	Hatfield,	Montgomery.
Dr. E. T. Quinn,	Jenkintown,	Montgomery.
Dr. N. H. Rahn,	Souderton,	Montgomery.
Dr. W. R. Roberts,	Norristown,	Montgomery.
Dr. H. N. Scholl,	Kulpsville,	Montgomery.
Dr. J. H. Seiple,	Centre Square,	Montgomery.
Dr. J. Q. Thomas,	Conshohocken,	Montgomery.
Dr. B. A. Tyler,	Royersford,	Montgomery.
Dr. M. Y. Weber,	Lower Providence,	Montgomery.
Dr. W. J. Wright,	Skippack,	Montgomery.
Dr. Cameron Shultz,	Danville,	Montour.
Dr. J. H. Snyder,	Washingtonville,	Montour.

School Medical Inspector—Cont'd.

Name.	Address.	County.
Dr. Charles E. Beck,	Portland,	Northampton.
Dr. W. J. Bleber,	Bethlehem,	Northampton.
Dr. Thomas A. Carroll,	Belfast,	Northampton.
Dr. B. F. Dillard,	East Bangor,	Northampton.
Dr. J. A. Fetherolf,	Stockertown,	Northampton.
Dr. A. S. Fox,	Easton,	Northampton.
Dr. J. L. Hornbeck,	Catasauqua (Lehigh Co.),	Northampton.
Dr. J. C. Keller,	Wind Gap,	Northampton.
Dr. Thomas Keen,	Bethlehem,	Northampton.
Dr. J. W. Kline,	Martins Creek,	Northampton.
Dr. H. A. Litzenger,	Walnutport,	Northampton.
Dr. J. E. Longacre,	Weaverville (Siegfried R. D.),	Northampton.
Dr. E. C. Miller,	East Bangor,	Northampton.
Dr. M. W. Phillips,	Chapman Quarries,	Northampton.
Dr. H. C. Pohl,	Nazareth,	Northampton.
Dr. T. W. Schwab,	Bath,	Northampton.
Dr. C. F. Stodlet,	Pen Argyle,	Northampton.
Dr. W. G. Tillman,	Easton,	Northampton.
Dr. C. E. Allison,	Elysburg,	Northumberland.
Dr. J. E. Bogar,	Millersburg (Dauphin Co.),	Northumberland.
Dr. S. S. Burg,	Northumberland,	Northumberland.
Dr. J. B. Cressinger,	Snubury,	Northumberland.
Dr. F. S. Derr,	Watsontown,	Northumberland.
Dr. W. H. Elister,	Sunbury,	Northumberland.
Dr. B. L. Kerchner,	Dalmatia,	Northumberland.
Dr. E. R. McDonald,	Marion Heights (Mt. Carmel),	Northumberland.
Dr. D. M. Niple,	Turbotville,	Northumberland.
Dr. H. T. Simmonds,	Shamokin,	Northumberland.
Dr. N. M. Smith,	Riverside,	Northumberland.
Dr. R. B. Tule,	Milton,	Northumberland.
Dr. B. E. Wilkinson,	Trevorton,	Northumberland.
Dr. B. F. Beale,	Duncannon,	Perry.
Dr. C. E. DeLaney,	Newport,	Perry.
Dr. G. W. Gault,	Marysville,	Perry.
Dr. M. Gearhart,	Millerstown,	Perry.
Dr. W. H. Hoopes,	Newport,	Perry.
Dr. A. R. Johnston,	New Bloomfield,	Perry.
Dr. G. S. Kinzer,	Markelsville,	Perry.
Dr. E. C. Kistler,	Blain,	Perry.
Dr. W. G. Morris,	Liverpool,	Perry.
Dr. W. T. Morrow,	Loysville,	Perry.
Dr. H. D. Reutter,	Duncannon,	Perry.
Dr. J. A. Shelby,	Shermansdale,	Perry.
Dr. M. I. Stein,	Millerstown,	Perry.
Dr. E. K. Wolf,	Ickesburg,	Perry.
Dr. H. W. Woods,	Blain,	Perry.
Dr. A. H. Catterall,	Hawley (Wayne Co.),	Pike.
Dr. A. J. Simons,	Newfoundland (Wayne Co.),	Pike.
Dr. F. I. Smith,	Shohola,	Pike.
Dr. L. E. Smith,	Bushkill,	Pike.
Dr. E. H. Ashcraft,	Coudersport,	Potter.
Dr. N. W. Church,	Ulysses,	Potter.
Dr. H. D. Hart,	Genesee,	Potter.
Dr. L. A. Horn,	Austin,	Potter.
Dr. James T. Hurd,	Galeton,	Potter.
Dr. D. E. Jacobs,	Oswayo,	Potter.
Dr. R. H. Jones,	Coudersport,	Potter.
Dr. F. G. Reese,	Coudersport,	Potter.
Dr. A. E. Winlack,	Shingle House,	Potter.
Dr. C. W. Bankes,	Middleport,	Schuylkill.
Dr. F. P. Barud,	Hegins,	Schuylkill.
Dr. J. E. Beale,	Coaldale,	Schuylkill.
Dr. J. F. Bryson,	Girardville,	Schuylkill.
Dr. J. J. Dalley,	McAdoo,	Schuylkill.
Dr. Harry Dechert,	Orwigsburg,	Schuylkill.
Dr. R. A. Dengler,	Delano,	Schuylkill.
Dr. T. C. Fegley,	Tremont,	Schuylkill.
Dr. R. B. Gray,	Port Carbon,	Schuylkill.
Dr. F. B. Harding,	Tamaqua,	Schuylkill.
Dr. David J. Hawk,	Power City,	Schuylkill.
Dr. L. D. Helm,	Schuylkill Haven,	Schuylkill.
Dr. W. H. Hinkel,	Tamaqua,	Schuylkill.
Dr. D. A. W. Huebner,	Fern Glen,	Schuylkill.
Dr. W. D. Karterman,	Hepler,	Schuylkill.
Dr. Mary B. Kingsbury,	Pottsville,	Schuylkill.
Dr. William Lebo,	Valley View,	Schuylkill.
Dr. James A. Lessig,	Schuylkill Haven,	Schuylkill.
Dr. Thomas McCutcheon,	Gordon,	Schuylkill.
Dr. J. F. Marshall,	Ashland,	Schuylkill.
Dr. W. H. Matten,	McKeansburg,	Schuylkill.
Dr. J. M. Monaghan,	Minersville,	Schuylkill.

School Medical Inspector—Cont'd.

Name.	Address.	County.
Dr. R. H. Renn,	Tremont,	Schuylkill.
Dr. W. R. Rentschler,	Ringtown,	Schuylkill.
Dr. John Rhoades,	Ringtown,	Schuylkill.
Dr. L. C. Robinhold,	Auburn,	Schuylkill.
Dr. J. B. Rogers,	Pottsville,	Schuylkill.
Dr. J. T. Ryan,	St. Clair,	Schuylkill.
Dr. G. O. O. Santee,	Cressona,	Schuylkill.
Dr. J. W. Schultz,	Tremont,	Schuylkill.
Dr. N. H. Stein,	Silver Creek,	Schuylkill.
Dr. H. H. Stewart,	Friedensburg,	Schuylkill.
Dr. R. H. Stutzman,	Tower City,	Schuylkill.
Dr. C. V. Wadlinger,	Port Carbon,	Schuylkill.
Dr. F. J. Walters,	Pine Grove,	Schuylkill.
Dr. Joseph L. Warme,	Pottsville,	Schuylkill.
Dr. E. E. Wiesner,	Tamaqua,	Schuylkill.
Dr. C. N. Broslus,	Shamokin Dam,	Snyder.
Dr. E. R. Decker,	Selingsgrove,	Snyder.
Dr. G. E. Hassinger,	Middleburg,	Snyder.
Dr. A. J. Herman,	Middleburg,	Snyder.
Dr. R. W. Johnston,	Selingsgrove,	Snyder.
Dr. D. E. Long,	Freeburg,	Snyder.
Dr. W. W. Longacre,	Mt. Pleasant Mills,	Snyder.
Dr. J. W. Sampsell,	Penns Creek,	Snyder.
Dr. F. W. Tool,	Freeburg,	Snyder.
Dr. H. F. Wagenseller,	Selingsgrove,	Snyder.
Dr. U. G. Bickell,	Shanksville,	Somerset.
Dr. C. R. Bittner,	Hooversville,	Somerset.
Dr. C. W. Frantz,	Confluence,	Somerset.
Dr. Henry Hertzler,	Jenners,	Somerset.
Dr. C. P. Large,	Meyersdale,	Somerset.
Dr. A. M. Lichty,	Elk Lick,	Somerset.
Dr. C. F. Livengood,	Boswell,	Somerset.
Dr. H. I. Marsden,	Somerset,	Somerset.
Dr. H. P. Myers,	Confluence,	Somerset.
Dr. F. E. Sass,	Sand Patch,	Somerset.
Dr. C. T. Saylor,	Rockwood,	Somerset.
Dr. W. H. H. Schrock,	Stoyestown,	Somerset.
Dr. Fred Shaffer,	Somerset,	Somerset.
Dr. W. P. Shaw,	Berlin,	Somerset.
Dr. George R. Speicher,	Rockwood,	Somerset.
Dr. H. A. Zimmerman,	Hollsopple,	Somerset.
Dr. J. L. Christian,	Lopez,	Sullivan.
Dr. P. C. Biddle,	Dushore,	Sullivan.
Dr. W. B. Beaumont,	Laceyville (Wyoming Co.),	Susquehanna.
Dr. A. S. Blair,	Hallstead,	Susquehanna.
Dr. C. W. Catterson,	Franklin Forks,	Susquehanna.
Dr. C. W. Cole,	Gelatt,	Susquehanna.
Dr. W. J. Condon,	Susquehanna,	Susquehanna.
Dr. A. L. Craft,	Herrick Centre,	Susquehanna.
Dr. H. M. Fry,	Rush,	Susquehanna.
Dr. H. B. Lathrop,	Springville,	Susquehanna.
Dr. W. E. Lloyd,	Forest City,	Susquehanna.
Dr. W. W. McNamara,	Thompson,	Susquehanna.
Dr. William E. Park,	New Milford,	Susquehanna.
Dr. W. W. Preston,	Montrose,	Susquehanna.
Dr. A. E. Snyder,	New Milford,	Susquehanna.
Dr. T. O. Williams,	Brooklyn,	Susquehanna.
Dr. J. G. Wilson,	Montrose,	Susquehanna.
Dr. C. E. Bingaman,	Leetonia,	Tioga.
Dr. Frank F. Castlebury,	Roaring Branch (Lycoming Co.),	Tioga.
Dr. E. B. Clark,	Knoxville,	Tioga.
Dr. W. A. DeWitt,	Blossburg,	Tioga.
Dr. D. T. Ditchburn,	Arnot,	Tioga.
Dr. S. A. Gaskill,	Covington,	Tioga.
Dr. C. C. Gentry,	Knoxville,	Tioga.
Dr. J. M. Gentry,	Wellsboro,	Tioga.
Dr. B. W. Genung,	Nelson,	Tioga.
Dr. S. P. Hakes,	Tioga,	Tioga.
Dr. E. M. Haley,	Blossburg,	Tioga.
Dr. H. C. Harkness,	Mainesburg,	Tioga.
Dr. C. W. Hazlett,	Wellsboro,	Tioga.
Dr. W. H. Hobbs,	Blossburg,	Tioga.
Dr. H. W. Howland,	Gaines,	Tioga.
Dr. F. H. Kennedy,	Middlebury Center,	Tioga.
Dr. J. H. Kiley,	Morris Run,	Tioga.
Dr. N. W. Mastin,	Wellsboro,	Tioga.
Dr. D. A. Patterson,	Westfield,	Tioga.
Dr. M. R. Pritchard,	Westfield,	Tioga.
Dr. J. C. Secor,	Westfield,	Tioga.
Dr. F. H. Shaw,	Wellsboro,	Tioga.
Dr. C. R. Smith,	Tioga,	Tioga.

School Medical Inspector—Cont'd.

Name.	Address.	County.
Dr. L. C. Smith,	Lawrenceville,	Tioga.
Dr. W. G. Stroble,	Liberty,	Tioga.
Dr. W. D. Vedder,	Wellstoro,	Tioga.
Dr. E. L. Ward,	Oseola,	Tioga.
Dr. C. W. Webb,	Wellshoro,	Tioga.
Dr. Edith Flower Wheeler,	Mansfield,	Tioga.
Dr. F. B. Brubaker,	Millinburg,	Union.
Dr. C. H. Dimm,	Millinburg,	Union.
Dr. M. L. Focht,	Lewisburg,	Union.
Dr. O. W. H. Glover,	Laurelton,	Union.
Dr. Charles A. Gundy,	Lewisburg,	Union.
Dr. A. V. Persing,	Allenwood,	Union.
Dr. T. C. Thornton,	Lewisburg,	Union.
Dr. Charles H. Cookson,	Venus,	Venango.
Dr. P. E. Cunningham,	Clintonville,	Venango.
Dr. J. F. Davis,	Oil City,	Venango.
Dr. G. W. Dille,	Cooperstown,	Venango.
Dr. Harry Hatch,	Pleasantville,	Venango.
Dr. E. A. Kuhns,	Emlenton,	Venango.
Dr. F. M. McClelland,	Utica,	Venango.
Dr. H. F. McDowell,	Franklin,	Venango.
Dr. S. W. McDowell,	Pittsville,	Venango.
Dr. George C. Magee,	Wesley,	Venango.
Dr. J. W. Monjar,	Seneca,	Venango.
Dr. W. J. Richey,	Diamond,	Venango.
Dr. A. W. Ricketts,	Dempseytown,	Venango.
Dr. C. P. Snyder,	Polk,	Venango.
Dr. G. M. B. Bradshaw,	Sugar Grove,	Warren.
Dr. E. S. Briggs,	Tidoute,	Warren.
Dr. D. H. Keller,	Russell,	Warren.
Dr. J. J. Knapp,	Youngsville,	Warren.
Dr. R. C. Meals,	Columbus,	Warren.
Dr. L. D. Paige,	Spring Creek,	Warren.
Dr. C. W. Schmechel,	Warren,	Warren.
Dr. F. C. Willard,	Clarendon,	Warren.
Dr. A. N. Booth,	Bentleyville,	Washington.
Dr. F. E. Cobb,	Marianna,	Washington.
Dr. C. T. Dodd,	Washington,	Washington.
Dr. B. A. Emery,	Eighty-four,	Washington.
Dr. E. E. French,	Bentleyville,	Washington.
Dr. W. J. Hawkins,	Millsboro,	Washington.
Dr. A. O. Hindman,	Cross Creek,	Washington.
Dr. J. W. Hunter,	Charleroi,	Washington.
Dr. E. J. Johnson,	Claysville,	Washington.
Dr. H. J. Kirby,	Cokeburg,	Washington.
Dr. L. G. Lutz,	Roscoe,	Washington.
Dr. M. F. Manning,	Reallsville,	Washington.
Dr. W. A. McCall,	Marianna,	Washington.
Dr. D. L. McCarrell,	Hickory,	Washington.
Dr. W. C. Martin,	California,	Washington.
Dr. W. D. Martin,	Dunns Station,	Washington.
Dr. J. M. Moore,	Midway,	Washington.
Dr. J. C. Nesbit,	Burgottstown,	Washington.
Dr. L. D. Sargent,	Washington,	Washington.
Dr. W. L. Scott,	Burgottstown,	Washington.
Dr. A. R. Shuster,	Finleyville,	Washington.
Dr. G. M. Sprowls,	West Middletown,	Washington.
Dr. T. H. Wallace,	McDonald,	Washington.
Dr. R. W. Wolfe,	Taylorstown,	Washington.
Dr. C. B. Wood,	Monongahela,	Washington.
Dr. John E. Bennett,	Starrucca,	Wayne.
Dr. A. H. Catterall,	Hawley,	Wayne.
Dr. F. C. Frisbie,	Equinunk,	Wayne.
Dr. E. B. Gavitt,	White Mills,	Wayne.
Dr. W. T. McConville,	Honesdale,	Wayne.
Dr. H. C. Many,	Bethany,	Wayne.
Dr. George C. Merriman,	Lake Como,	Wayne.
Dr. O. J. Mullen,	Hamlin,	Wayne.
Dr. L. B. Nielsen,	Honesdale,	Wayne.
Dr. H. C. Noble,	Waymart,	Wayne.
Dr. A. J. Stimons,	Newfoundland,	Wayne.
Dr. A. C. Voligt,	Hawley,	Wayne.
Dr. H. C. White,	Ariel,	Wayne.
Dr. R. M. Alexander,	Bollivar,	Westmoreland.
Dr. L. S. Asper,	Smithton,	Westmoreland.
Dr. A. J. Bearer,	New Kensington,	Westmoreland.
Dr. George Boehm,	Arona,	Westmoreland.
Dr. G. M. Dickson,	Adamsburg,	Westmoreland.
Dr. W. L. Fennel,	Salina,	Westmoreland.
Dr. Bert Haughwout,	Derry,	Westmoreland.

School Medical Inspector—Cont'd.

Name.	Address.	County.
Dr. F. E. Henry,	Vandergrift Heights,	Westmoreland.
Dr. J. D. Jack,	New Alexandria,	Westmoreland.
Dr. J. B. Laughrey,	Sutersville,	Westmoreland.
Dr. E. N. Lewis,	Livermore,	Westmoreland.
Dr. E. E. McAdoo,	Ligonier,	Westmoreland.
Dr. A. H. McMurray,	Youngwood,	Westmoreland.
Dr. L. M. Mitchell,	Pricedale,	Westmoreland.
Dr. C. G. Oyer,	Merwin (Apollo),	Westmoreland.
Dr. E. L. Piper,	Export,	Westmoreland.
Dr. I. M. Portser,	Greensburg,	Westmoreland.
Dr. L. J. Reese,	Bolivar,	Westmoreland.
Dr. J. Q. Robinson,	West Newton,	Westmoreland.
Dr. Thomas St. Clair,	Latrobe,	Westmoreland.
Dr. C. A. Shirey,	Manor,	Westmoreland.
Dr. Charles M. Sloan,	Madison,	Westmoreland.
Dr. Charles E. Taylor,	Irwin,	Westmoreland.
Dr. H. W. Tittle,	New Florence,	Westmoreland.
Dr. D. O. Todd,	Trafford,	Westmoreland.
Dr. H. M. Wellman,	Blairsville (Indiana Co.),	Westmoreland.
Dr. J. W. Wenzel,	Donegal,	Westmoreland.
Dr. F. J. Bardwell,	Tunkhannock,	Wyoming.
Dr. William B. Beaumont,	Laceyville,	Wyoming.
Dr. Albert Beilstein,	Meshoppen,	Wyoming.
Dr. C. L. Boston,	Center Moreland,	Wyoming.
Dr. George M. Harrison,	Meshoppen,	Wyoming.
Dr. George M. Kinner,	North Meboopany,	Wyoming.
Dr. H. L. McKown,	Tunkhannock,	Wyoming.
Dr. C. R. Newton,	Nicholson,	Wyoming.
Dr. George H. Rauch,	Noxen,	Wyoming.
Dr. H. O. Rohrbach,	Mill City,	Wyoming.
Dr. D. W. Stardevant,	Laceyville,	Wyoming.
Dr. J. C. Atkins,	Red Lion,	York.
Dr. G. W. Bahn,	Spring Grove,	York.
Dr. J. R. Brodbeck,	Codorus,	York.
Dr. W. L. Crawford,	Dillsburg,	York.
Dr. O. G. Curran,	Red Lion,	York.
Dr. W. D. Danner,	Glenville,	York.
Dr. O. A. Delle,	New Salem,	York.
Dr. G. M. Fickes,	Seven Valleys,	York.
Dr. E. M. Free,	Stewartstown,	York.
Dr. C. H. Gerry,	Shrewsbury,	York.
Dr. C. J. Hamme,	Dover,	York.
Dr. L. M. Hartman,	York,	York.
Dr. H. B. Hetrick,	Rossville,	York.
Dr. H. C. Hetrick,	Lewisberry,	York.
Dr. C. G. Hildebrand,	Loganville,	York.
Dr. E. A. Hoover,	Wrightsville,	York.
Dr. W. H. Horning,	York,	York.
Dr. H. W. Howden,	Red Lion,	York.
Dr. J. M. Hyson,	Red Lion,	York.
Dr. W. H. McCurdy,	Delta,	York.
Dr. E. S. Mann,	Dallastown,	York.
Dr. J. C. May,	Manchester,	York.
Dr. John Meisenhelder,	Hanover,	York.
Dr. J. C. Murphy,	York Haven,	York.
Dr. N. Allen Overmiller,	East Prospect,	York.
Dr. B. F. Parker,	York,	York.
Dr. E. E. Phillips,	Etters,	York.
Dr. D. C. Posey,	Brogueville,	York.
Dr. S. J. Roberts,	Etters,	York.
Dr. W. C. Seltz,	Glen Rock,	York.
Dr. C. H. Smith,	York,	York.
Dr. W. H. Smithson,	New Park,	York.
Dr. H. David Snyder,	York,	York.
Dr. E. S. Stambaugh,	Thomasville,	York.
Dr. L. H. Sterner,	Porters Sideling,	York.
Dr. A. C. Wentz,	Hanover,	York.
Dr. L. V. Williams,	Mt. Wolf,	York.
Dr. George N. Yagle,	Red Lion,	York.
Dr. James Yagle,	New Freedom,	York.
Dr. W. A. Yeagy,	Dillsburg,	York.

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 Classification Clerk, William H. Briggs, Folsom, Delaware County.
 Returns Clerk, Elijah B. Jenkyn, Tower City, Schuylkill County.
 Stenographers—Miss Erma K. Longenecker, Middletown, Dauphin County.
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- Inspector—R. J. Brauner, Carlisle, Cumberland County.

LOCAL REGISTRARS—1914.

Local Registrar.	Post Office Address.	County.
J. H. Seasey,	Biglerville,	Adams.
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D. D. Delap,	Bendersville,	Adams.
Charles Hafer,	Abbottstown,	Adams.
W. W. Reeser,	East Berlin,	Adams.
Dr. James E. Glenn,	Fairfield,	Adams.
Dr. Henry Stewart,	Gettysburg,	Adams.
R. A. Hartman,	Littlestown,	Adams.
Dr. George L. Rice,	McSherrystown,	Adams.
William R. Snyder,	New Oxford,	Adams.
Dr. C. L. Myers,	York Springs,	Adams.

Local Registrars—Cont'd.

Local Registrar.	Post Office Address.	County.
Dr. F. E. Herriott,	Carnegie,	Allegheny.
Dr. Charles C. Huff,	Homestead,	Allegheny.
Edward Felton,	Dormont,	Allegheny.
A. C. McDivitt,	Wall,	Allegheny.
Robert W. Dickson,	Sewickley,	Allegheny.
A. J. Richards,	McKeesport,	Allegheny.
Dr. L. T. Mitchell,	Aspinwall,	Allegheny.
T. C. Tipper,	Avalon,	Allegheny.
Dr. J. C. Welch,	Bellevue,	Allegheny.
J. Reinehr,	Tarentum,	Allegheny.
L. L. Todd,	Braddock,	Allegheny.
S. W. Patton,	Bridgeville,	Allegheny.
R. J. Hardy,	Carnegie,	Allegheny.
C. S. Bunting,	Cheswick,	Allegheny.
Richard Titterington,	Clairton,	Allegheny.
Roland Hand,	Coraopolis,	Allegheny.
E. W. McCort,	Crafton,	Allegheny.
Courtney L. Whitaker,	Dravosburg,	Allegheny.
Arthur E. Pitts,	Duquesne,	Allegheny.
Dr. W. L. Henderson,	East McKeesport,	Allegheny.
Dr. A. E. Roose,	East Pittsburgh,	Allegheny.
John Montford,	Pittsburgh,	Allegheny.
E. E. Patterson,	Elizabeth,	Allegheny.
Frederick Kronenberger,	Sharpsburg,	Allegheny.
J. L. Kidd,	Emsworth,	Allegheny.
A. R. Dunbar,	Etna,	Allegheny.
A. W. Day,	Glassport,	Allegheny.
D. E. Kendig,	Glenfield,	Allegheny.
Addison M. Reeder,	Carnegie, R. D. No. 2,	Allegheny.
James L. Rankin,	Pittsburgh,	Allegheny.
Connell Dignam,	Leetsdale,	Allegheny.
Otto A. Zange,	McKees Rocks,	Allegheny.
P. J. Bauer,	Millvale,	Allegheny.
George J. Standing,	Mt. Oliver,	Allegheny.
Dr. A. P. Fogleman,	Munhall,	Allegheny.
J. O. Jones,	Braddock,	Allegheny.
John R. McMichael,	Oakdale,	Allegheny.
Dr. W. H. Cooper,	Oakmont,	Allegheny.
John Taylor,	Sewickley,	Allegheny.
Edwin B. Keppel,	Piteairn,	Allegheny.
James W. Kelley,	Port Vue,	Allegheny.
H. L. Evans,	Rankin,	Allegheny.
Fred A. Sauer,	Pittsburgh,	Allegheny.
T. C. Rankin,	Swissvale,	Allegheny.
W. A. Gibson,	Tarentum,	Allegheny.
L. R. Sprows,	Turtle Creek,	Allegheny.
T. J. Miller,	Verona,	Allegheny.
Robert S. Wilson,	McKeesport,	Allegheny.
J. M. Pollock,	Wilmerding,	Allegheny.
Walter K. Elder,	Wilkinsburg,	Allegheny.
Dr. P. B. Benz, Jr.,	Carrick,	Allegheny.
George M. Weaver,	Imperial,	Allegheny.
G. G. Plyer,	Pittsburgh,	Allegheny.
R. E. Drummond,	West View,	Allegheny.
Gregor Stein,	Pittsburgh, Mt. Oliver Station,	Allegheny.
John A. Grad,	Hoboken,	Allegheny.
Oscar A. Loeffler,	Crafton,	Allegheny.
Fred S. Cothery,	Wilson,	Allegheny.
O. A. Mardorf,	Springdale,	Allegheny.
H. J. Duncan,	Ingram,	Allegheny.
O. P. Naylor,	Allison Park,	Allegheny.
Frederick Dierstein,	Whitaker,	Allegheny.
Dr. J. F. Edwards,	Pittsburgh,	Allegheny.
W. F. Pauly,	Apollo,	Armstrong.
A. L. McCullough,	Atwood,	Armstrong.
James A. Foster,	Parker's Landing,	Armstrong.
J. E. Stewart,	Johnetta,	Armstrong.
O. S. Marshall,	Rural Valley,	Armstrong.
W. H. Eynon,	Kaylor,	Armstrong.
J. D. Coleman,	Dayton,	Armstrong.
Frank H. McNutt,	Ford City,	Armstrong.
Harry E. Himes,	Kittanning,	Armstrong.
Dr. S. J. McMains,	Leechburg,	Armstrong.
W. W. Corbett,	New Bethlehem,	Armstrong.
J. H. Alexander,	Worthington,	Armstrong.
Dr. L. W. Schmatterly,	Freeport,	Armstrong.
Edward M. Shaul,	Manorville,	Armstrong.
J. E. Kinnard,	Cochran Mills,	Armstrong.
William McGarvey,	Cowansville, R. D. No. 1,	Armstrong.
W. T. Milden,	Queensdown,	Armstrong.
Miss Norma Semmens,	Kittanning,	Armstrong.
J. M. White,	Mahoning,	Armstrong.
J. Cal. George,	Elderton,	Armstrong.

Local Registrars—Cont'd.

Local Registrar.	Post Office Address.	County.
D. S. Keifer,	Alliquippa,	Beaver.
W. J. Blesse,	Baden,	Beaver.
William T. Farr,	Beaver,	Beaver.
H. M. Roberts,	Beaver Falls,	Beaver.
James L. Brown,	West Bridgewater,	Beaver.
William H. Thomas,*	West Bridgewater,	Beaver.
H. M. McCoy,	Beaver Falls,	Beaver.
Dr. G. F. Mohr,	Freedom,	Beaver.
P. R. Kincaid,	Burgettstown, R. D. No. 1,	Beaver.
Isaac Stephens,*	Burgettstown,	Beaver.
Frank B. Golden,	New Brighton,	Beaver.
Elmer H. Fisher,	Monaca,	Beaver.
Dr. Philip J. Sohn,	Economy,	Beaver.
Dr. A. E. Torrens,*	Conway,	Beaver.
Horace L. Couch,	New Brighton,	Beaver.
Dr. S. D. Sturgeon,	New Galilee,	Beaver.
R. A. Smith,	Rochester,	Beaver.
T. C. Glenn,	Hookstown,	Beaver.
George W. Glasser,	South Heights,	Beaver.
Dr. R. S. Hensell,	Midland,	Beaver.
Albert S. Dean,	Woodlawn,	Beaver.
Mrs. S. B. Hays,	Smith's Ferry,	Beaver.
G. Hamilton Young,	Darlington,	Beaver.
J. R. Irvine,	Bedford,	Bedford.
Dr. J. F. Price,	Six Mile Run,	Bedford.
E. E. Bowen,	Ererett,	Bedford.
Edwin M. Painter,	Hopewell,	Bedford.
Dr. D. T. Rees,	Hyndman,	Bedford.
H. W. Holler,	Mann's Choice,	Bedford.
A. J. Crissman, Sr.,	New Paris,	Bedford.
W. A. McGregor,	Alum Bank,	Bedford.
W. B. Piller,	Rainsburg,	Bedford.
J. G. Slick,	St. Clairsville,	Bedford.
T. C. Bradley,	Saxton,	Bedford.
Dr. E. L. Smith,	Schellsburg,	Bedford.
C. W. Bulger,	Woodbury,	Bedford.
A. L. Tewell,	Chaneyville,	Bedford.
W. G. Bortz,	Cumberland Valley,	Bedford.
Mrs. D. C. Mundwiler,	Clearville,	Bedford.
Allen T. Ehst,	Bechtelsville,	Berks.
John H. Bright,	Bernville,	Berks.
Ammon Albright,	Birdsboro,	Berks.
Charles B. Spatz,	Boyetown,	Berks.
J. D. Naftzinger,	Centreport,	Berks.
Dr. O. T. Gehris,	Fleetwood,	Berks.
William O. Heinely,	Hamburg,	Berks.
Dr. I. L. Peters,	Kutztown,	Berks.
A. D. Kunkel,	Klinesville,	Berks.
Dr. C. D. Werley,	Topton,	Berks.
Henry B. Eberly,	Womelsdorf,	Berks.
F. P. Heins,	Reading,	Berks.
C. E. Spard,	West Leesport,	Berks.
Irvin N. Manwiler,	Mount Penn,	Berks.
W. K. Brendle,	Shillington,	Berks.
Thomas Wilson,	Wyomissing,	Berks.
E. P. Etchberger,	West Reading,	Berks.
Dr. M. L. Miller,	Mohnton,	Berks.
Eli S. Bower,	Oley,	Berks.
J. W. Givin,	Bellwood,	Blair.
John M. Kyle,	Duncansville,	Blair.
Robert W. Smith,	Holidaysburg,	Blair.
F. N. Dunmire,	Juniata,	Blair.
John G. Skyles,	Martinsburg,	Blair.
P. F. Holland,	Newry,	Blair.
Roy A. Greene,	Rearing Spring,	Blair.
W. F. Taylor,	Tyone,	Blair.
S. Landis Isenberg,	Williamsburg,	Blair.
Samuel B. Treese,	Altoona,	Blair.
Arthur P. Watson,	Towanda,	Bradford.
H. K. Mitchell,	Troy,	Bradford.
E. A. Strong,	Wyalusing,	Bradford.
C. P. Dewey,	Gillett,	Bradford.
A. D. Wilson,	Alba,	Bradford.
George W. Parsons,	Athens,	Bradford.
A. P. Weldy,	Burlington,	Bradford.
W. H. Collins,	Canton,	Bradford.
Dr. G. W. Darga,	LeRaysville,	Bradford.
C. G. Summers,	Monroeton,	Bradford.
Dr. W. F. Harsberger,	New Albany,	Bradford.
Mollie W. Rice,	Rome,	Bradford.
Charles C. Yocum,	Sayre,	Bradford.
LaVerne Brown,	Waverly, N. Y.,	Bradford.
J. H. Calkins,	Sylvania,	Bradford.

Local Registrars—Cont'd.

Local Registrar.	Post Office Address.	County.
J. H. Brelsford,	South Langhorne,	Bucks.
Jesse O. Thomas,	Bristol,	Bucks.
C. D. Hotchkiss,	Doylestown,	Bucks.
Howard Vansant,	Hulmeville,	Bucks.
J. B. Stackhouse,	Langhorne,	Bucks.
Paschal C. Hibbs,	South Langhorne,	Bucks.
Thaddeus B. Fowler,	Morrisville,	Bucks.
Thomas C. Wert,	New Hope,	Bucks.
Dr. J. A. Crewitt,	Newtown,	Bucks.
I. C. Barndt,	Perkasie,	Bucks.
C. William Freed,	Quakertown,	Bucks.
C. H. Rapp,	Richlandtown,	Bucks.
Hysler J. Zane,	Sellersville,	Bucks.
Harry C. Hunsicker,	Silverdale,	Bucks.
E. E. Yeager,	Yardley,	Bucks.
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Dr. S. P. McIlhatten,	Ivyland,	Bucks.
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Ryan C. Rapp,	Riegelsville,	Bucks.
Joshua H. Cooper,	Tullytown,	Bucks.
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J. H. Ramsey,	Bruin,	Butler.
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J. H. Black,	Connoquenessing,	Butler.
Dr. R. L. Allison,	Kau Claire,	Butler.
A. Lotz,	Evans City,	Butler.
J. S. Foster,	Petrolia,	Butler.
W. G. Bassler,	Zellenople,	Butler.
Dr. W. B. Campbell,	Harrisville,	Butler.
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C. H. Perry,	Chest Springs,	Cambria.
A. C. Hipp,	Johnstown,	Cambria.
Joseph R. Hummel,	Johnstown,	Cambria.
C. W. Davis,	Conemaugh,	Cambria.
Oliver Evans,	Ebensburg,	Cambria.
H. E. Shaffer,	Johnstown, R. D. No. 4,	Cambria.
W. E. Zimmerman,	Conemaugh,	Cambria.
Paul Ferguson,	Gallitzin,	Cambria.
A. G. Neff,	Hastings,	Cambria.
James Biter,	Loretto,	Cambria.
Dr. S. W. Worrell,	Patton,	Cambria.
D. T. Edwards,	Johnstown,	Cambria.
J. M. Miller,	Scalp Level,	Cambria.
Benjamin Cawthern,	South Fork,	Cambria.
H. S. Huey,	Gallitzin,	Cambria.
Louis Belter,	Wilmore,	Cambria.
Jay Troxell,	Glasgow,	Cambria.
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Dr. J. A. Lynch,	Cresson,	Cambria.
Edward V. Boley,	Cresson,	Cambria.
L. E. Davis,	Vintondale,	Cambria.
Dr. C. B. Jones,	Summerhill,	Cambria.
William Lebzelter,	Johnstown,	Cambria.
Albert P. Wyland,	Spangler,	Cambria.
William Sparks,*	Portage,	Cambria.
H. B. Mutthersbough,	Driftwood,	Cameron.
Frank G. Judd,	Emporium,	Cameron.
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Theodore Lindermuth,	East Mauch Chunk,	Carbon.
George W. Fisher,	Whitehaven,	Carbon.
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Robert A. Heberling,	Mauch Chunk,	Carbon.
Dr. E. F. Eshleman,	Parryville,	Carbon.

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J. B. Hoffman,	Phillipsburg,	Centre.
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B. W. Shipley,	Fleming,	Centre.
W. A. Sickel,	Snow Shoe,	Centre.
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William C. Mackey,	Avondale,	Chester.
Dr. H. E. Williams,	Coatesville,	Chester.
Dr. H. Y. Pennell,	Downingtown,	Chester.
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Jos. B. Strickland,	Oxford,	Chester.
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Samuel Jackson,	Parkeburg,	Chester.
I. E. Miller,	Phoenixville,	Chester.
Dr. J. C. Mewhinney,	Spring City,	Chester.
Dr. C. E. Woodward,	West Chester,	Chester.
Augustus Yarnall,	West Grove,	Chester.
Maurice S. Lord,	Pottstown, R. D.,	Chester.
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Dr. Gertrude Lawson,	Clarion,	Clarion.
G. B. Woods,	Curlsville,	Clarion.
Dr. R. J. Greer,	East Brady,	Clarion.
Dr. O. G. Moore,	Knox,	Clarion.
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F. C. Corbett,	New Bethlehem,	Clarion.
Dr. C. W. Hoffman,	Rimersburg,	Clarion.
J. S. Craig,	St. Petersburg,	Clarion.
William Hack,	Shippville,	Clarion.
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H. C. Conner,	Barnside,	Clearfield.
Hiram Shultz,	Phillipsburg,	Clearfield.
W. A. Hagerty,	Clearfield,	Clearfield.
F. X. Spangle,	Coalport,	Clearfield.
W. P. Tate,	Curwensville,	Clearfield.
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S. K. Ames,	Irvona,	Clearfield.
S. C. Kirk,	Lanher City,	Clearfield.
B. H. Bell,	Mahaffey City,	Clearfield.
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George J. Weber,	Troutville,	Clearfield.
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O. K. Miller,	Avis,	Clinton.
S. W. Gardner,	Beech Creek,	Clinton.
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John J. Dempsey,	Renovo,	Clinton.
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Mary Walsh,	Centralia,	Columbia.

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Dr. A. H. Cartright,	Conneautville,	Crawford.
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C. E. Aikin,	Hydetown,	Crawford.
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Allison Mook,	Saegertown,	Crawford.
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Dr. George W. Ellison,	Townville,	Crawford.
Dr. Robert Clark,	Venango,	Crawford.
Dr. Henry M. Daniels,	Woodcock,	Crawford.
Dr. John K. Roberts,	Meadville,	Crawford.
Robert A. Kerr,	Titusville,	Crawford.
Willard C. Waid,	Guys Mills,	Crawford.
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G. G. Guistwhite,	New Cumberland,	Cumberland.
Dr. W. B. Reynolds,	Newville,	Cumberland.
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W. E. Knerr,	Pillow,	Dauphin.
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William Pechman,	Marcus Hook,	Delaware.
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Benjamin T. Lewis,	Media,	Delaware.
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F. H. Bassett,	Norwood,	Delaware.
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James Miller,	Upland,	Delaware.
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John C. MacDowell,	Chester,	Delaware.
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B. D. Eldridge,	Brandywine Summit,	Delaware.
J. L. Galloway,	Moores,	Delaware.
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J. M. Fronefeld,	Wayne,	Delaware.

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Thomas J. Ralston, Jr.,	Millbourne,	Delaware.
George Younger, Sr.,	Johnsonburg,	Elk.
James Penfield,	Ridgway,	Elk.
Dr. W. M. Black,	St. Marys,	Elk.
W. H. Weed,	Weedville,	Elk.
Joseph F. Metts,	Hallton,	Elk.
Daniel Phalen,	Brockport,	Elk.
James C. Henning,	Nansen,	Elk.
Dr. G. M. Hutcheson,	Dagus Mines,	Elk.
J. H. Bennett,	Edinboro,	Erie.
J. H. Dean,	Elgin,	Erie.
Dr. J. W. Wright,	Erie,	Erie.
J. H. Taylor,	Fairview,	Erie.
H. C. Hull,	Girard,	Erie.
Everett Stodman,	McKean,	Erie.
C. J. Runnels,	Mill Village,	Erie.
C. D. Videtto,	North East,	Erie.
C. P. Miller,	East Springfield,	Erie.
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Charles Hitchcock,	Wattsburg,	Erie.
Dr. G. A. Elston,	Corry,	Erie.
Dr. J. M. Peters,	Albion,	Erie.
L. M. Truxal,	Belleverson,	Fayette.
Dr. Alfred C. Smith,	South Brownsville,	Fayette.
Dr. L. N. Reichard,	Brownsville,	Fayette.
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David Williams,	Dunbar,	Fayette.
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B. C. Slocum,	Perryopolis,	Fayette.
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H. A. Shipe,	Marienville,	Forest.
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C. H. Clippinger,	Greencastle,	Franklin.
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Z. C. Ragan,	Waynesburg,	Greene.
T. G. Phillips,	New Freeport,	Greene.
G. B. Murdock,	Clarksville,	Greene.
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Silas Cutshall,	Broadtop,	Huntingdon.
Myron McClain,	Cassville,	Huntingdon.
H. L. G. Lytle,	Coalmont,	Huntingdon.
Isaac N. Horton,	Dudley,	Huntingdon.
William L. Johnston,	Huntingdon,	Huntingdon.
H. H. Swope,	Mapleton Depot,	Huntingdon.
Thomas G. Estep,	Alexandria,	Huntingdon.

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Dr. Charles Campbell,	Petersburg,	Huntingdon.
J. A. Stevens,	Three Springs,	Huntingdon.
Mrs. J. M. Fleming,	Blairs Mills,	Huntingdon.
J. M. Lutz,	Shirleysburg,	Huntingdon.
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W. J. Smith,	Glen Campbell,	Indiana.
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Dr. R. O. Moorhead,	Brockwayville,	Jefferson.
Dr. C. P. O'Loughlin,	Brookville,	Jefferson.
Harry T. Jones,	Corsica,	Jefferson.
George L. Glenn,	Punxsutawney,	Jefferson.
Perry B. Love,	Reynoldsville,	Jefferson.
Dr. W. W. Carrier,	Summerville,	Jefferson.
W. B. Stauffer,	West Reynoldsville,	Jefferson.
Amos Holben,	Worthville,	Jefferson.
F. W. Covert,	Falls Creek,	Jefferson.
F. T. Stockdale,	North Point,	Jefferson.
Harry Truman,	Sigel,	Jefferson.
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Dr. D. M. Crawford,	Mifflintown,	Junia.
A. B. Heckerman,	Port Royal,	Junia.
W. H. Brubaker,	Thompsonstown,	Junia.
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John H. Wehr,	Dalton,	Lackawanna.
Ignatz Gutknecht,	Priceburg,	Lackawanna.
P. H. Cooney,	Dunmore,	Lackawanna.
Avery Van Campen,	Elmhurst,	Lackawanna.
Willis Northrup,	Glenburn,	Lackawanna.
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Dr. Sumner D. Davis,	Jermyn,	Lackawanna.
George Sisson,	Factoryville,	Lackawanna.
George Buckingham,	Mayfield,	Lackawanna.
Charles F. Aiken,	Moosic,	Lackawanna.
John J. Carbine,	Olyphant,	Lackawanna.
Antonio Biancardi,	Old Forge,	Lackawanna.
Evan G. Evans,	Taylor,	Lackawanna.
M. J. McGowan,	Throop,	Lackawanna.
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Dr. N. C. Mackey,	Waverly,	Lackawanna.
Cornelius Eggleston,	Peckville,	Lackawanna.
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James Lichty,	Terre Hill,	Lancaster.
C. B. Zwally,	Akron,	Lancaster.
Henry B. Clepper,	Columbia,	Lancaster.
C. G. Reese,	Elizabethtown,	Lancaster.
F. S. Klinger,	Ephrata,	Lancaster.
Jacob B. Young,	Lititz,	Lancaster.
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Dr. J. A. Hoffman,	New Holland,	Lancaster.
J. Allan Kirk,	Quarryville,	Lancaster.
Dr. George E. Day,	Strasburg,	Lancaster.
Dr. W. G. Binkley,	Washingtonboro,	Lancaster.
Dr. J. M. Shartie,	Lancaster,	Lancaster.
William S. Martin,	Mountville,	Lancaster.
Oscar H. Moore,	Christiana,	Lancaster.

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Dr. L. K. Leslie,	Bareville,	Lancaster.
Dr. G. W. H. Frew,	Paradise,	Lancaster.
E. E. Dornbach,	Denver,	Lancaster.
H. E. McClymonds,	Ellwood City,	Lawrence.
E. H. Stemmmons,	Enon Valley,	Lawrence.
Albert Dahl,	Hazel Dell,	Lawrence.
Dr. G. N. Mealy,	New Wilmington,	Lawrence.
C. C. Horner,	New Castle,	Lawrence.
J. Dindinger,	Wampum,	Lawrence.
F. B. Moorhead,	Volant,	Lawrence.
W. H. Lentz,	Jonestown,	Lebanon.
Dr. A. W. Gernert,	Myerstown,	Lebanon.
S. F. Engle,	Palmyra,	Lebanon.
W. H. H. Smith,	Annyville,	Lebanon.
E. L. Kreider,	Lebanon,	Lebanon.
Elmer E. Steiner,	Richland,	Lebanon.
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Ray A. Young,	Coopersburg,	Lehigh.
R. W. Gangewere,	Emaus,	Lehigh.
Harry Clark,*	South Bethlehem,	Lehigh.
Daniel Reed,	South Bethlehem,	Lehigh.
O. P. Knauss,	Macungie,	Lehigh.
J. W. Roberts,	Slatington,	Lehigh.
William H. Yoder,	Trexlerstown,	Lehigh.
Neil J. McCafferty,	Allentown,	Lehigh.
P. Z. Kramer,	Coplay,	Lehigh.
Oliver F. Bortz,	South Allentown,	Lehigh.
R. D. DeLong,	Alburtis,	Lehigh.
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J. C. Johnson,	Avoca,	Luzerne.
John Fraley,	Courtdale,	Luzerne.
Will Norton,	Dallas,	Luzerne.
H. L. Poust,	Dorrancton,	Luzerne.
J. R. Hatten,	Edwardsville,	Luzerne.
Michael Hayes,	Pittston,	Luzerne.
H. H. Hadsall,	Porty Fort,	Luzerne.
J. B. Hanlon,	Freeland,	Luzerne.
J. F. Schualtz,	Pittston,	Luzerne.
W. W. Hindennach,	Jeddo,	Luzerne.
Albert E. Miller,	Kingston,	Luzerne.
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Robert J. Blair,	Luzerne,	Luzerne.
Anthony Werth,	Nanticoke,	Luzerne.
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I. J. Jamison,	New Columbus,	Luzerne.
Thomas Golightly,	Parsons,	Luzerne.
Dr. Charles L. Ashley,	Plymouth,	Luzerne.
J. B. Anderson,	Shickshinny,	Luzerne.
Michael Ginty,	Sugar Notch,	Luzerne.
Henry E. Miller,	Malthy,	Luzerne.
James Walker,	Peely,	Luzerne.
George F. Krapf,	Hazleton,	Luzerne.
W. L. Hartman,	Pittston,	Luzerne.
H. S. Townend,	Wyoming,	Luzerne.
Frank F. Baetz,	White Haven,	Luzerne.
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Fred H. Gates,	Wilkes-Barre,	Luzerne.
J. D. Getting,	Conyngham,	Luzerne.
Dr. A. J. Baker,	Duryea,	Luzerne.
M. B. Comerford,	Plymouth,	Luzerne.
William S. Carson,	DuBoistown,	Lycoming.
C. F. Johnson,	Hughesville,	Lycoming.
C. B. Seely,	Jersey Shore,	Lycoming.
S. J. Bardo,	Montgomery,	Lycoming.
David Updegraff,	Montoursville,	Lycoming.
Dr. T. Kenneth Wood,	Muncy,	Lycoming.
R. M. Clark,	Picture Rocks,	Lycoming.
J. H. Miller,*	Salladasburg,	Lycoming.
L. W. Thomas,	Salladasburg,	Lycoming.
A. O. Ball,	Williamsport, Sta. 5,	Lycoming.
J. J. Halloran,	Ralston,	Lycoming.
William H. McInroy,	Slate Run,	Lycoming.
R. B. Staver,	Williamsport,	Lycoming.
J. H. Coon,	Eldred,	McKean.
Charles W. Evans,	Kane,	McKean.
A. O. Downey,	Mount Jewett,	McKean.

Local Registrars—Cont'd.

Local Registrar.	Post Office Address.	County.
Dr. H. L. McCoy,	Smethport,	McKean.
C. W. Bishop,	Port Allegany,	McKean.
William Roedel,	Bradford,	McKean.
F. R. Kay,	Clark,	Mercer.
Harry L. Keck,	Greenville,	Mercer.
Ira C. Black,	Grove City,	Mercer.
J. M. Campbell,	Mercer,	Mercer.
O. L. Mook,	New Lebanon,	Mercer.
W. Whitehead,	Sharon,	Mercer.
W. A. Graber,	Sharpville,	Mercer.
Dr. J. C. Bachop,	Sheakleyville,	Mercer.
Mrs. S. R. Pettitt,	West Middlesex,	Mercer.
George A. Stambaugh,	Wheatland,	Mercer.
Dr. J. C. Cooley,	Sandy Lake,	Mercer.
R. B. Donaldson,	Jackson Centre,	Mercer.
Henry W. Redfoot,	Freonia,	Mercer.
L. W. Donaldson,*	Jackson Centre,	Mercer.
A. T. Havell,	Parrell,	Mercer.
Dr. D. B. Hanna,	Stoneboro,	Mercer.
T. R. McElhaney,	Jamestown,	Mercer.
Free R. McElhaney,	Jamestown,	Mercer.
H. H. Lamb, Jr.,	Lewistown,	Mifflin.
W. F. Roche,	McVeytown,	Mifflin.
Ira H. Wilson,	Newton Hamilton,	Mifflin.
Dr. William H. Kohler,	Milroy,	Mifflin.
William A. Creighton,	Burnham,	Mifflin.
B. E. Zerby,	Allensville,	Mifflin.
John J. Burd,	Delaware Water Gap,	Monroe.
Harry E. Smith,	East Stroudsburg,	Monroe.
A. H. Schoonover,	Stroudsburg,	Monroe.
M. L. Serfass,	Brodheads ville,	Monroe.
Harry C. Rowe,	Mt. Pocono,	Monroe.
Elmer Singer,	Tannersville,	Monroe.
G. C. Anderson,	Ardmore,	Montgomery.
H. X. Dougherty,	Red Hill,	Montgomery.
H. V. Everham,	Ambler,	Montgomery.
Willis D. Bare,	Bridgeport,	Montgomery.
Sallie E. Faringer,	Collegeville,	Montgomery.
William Neville,	Conshohocken,	Montgomery.
L. Y. Meschter,	East Greenville,	Montgomery.
H. A. Summers,	Green Lane,	Montgomery.
Reuben Hockman,	Hatboro,	Montgomery.
Dr. L. L. Cope,	South Hatfield,	Montgomery.
J. G. Trank,*	Jenkintown,	Montgomery.
Charles D. Wright,	Jenkintown,	Montgomery.
Dr. J. W. Bauman,	Lansdale,	Montgomery.
A. P. Redifer,	Narberth,	Montgomery.
Charles E. White,	Norristown,	Montgomery.
H. S. Swartley,	North Wales,	Montgomery.
Clarence Hunsberger,*	Pennsburg,	Montgomery.
George W. Walker,	Pennsburg,	Montgomery.
John B. Evans,	Pottstown,	Montgomery.
Fred S. Morris,	Rockledge,	Montgomery.
C. O. Grander,	Royersford,	Montgomery.
F. A. Bunting,	Souderton,	Montgomery.
F. B. Rushong,	Trappe,	Montgomery.
J. Rufus Barr,	West Conshohocken,	Montgomery.
Linford G. Knipe,	West Telford,	Montgomery.
Edwin L. Miller,	Schwenksville,	Montgomery.
Dr. Cameron Shultz,	Danville,	Montour.
W. R. Robinson,	Washingtonville,	Montour.
Emanuel L. Flory,	Bangor,	Northampton.
James K. Worman,	Bath,	Northampton.
J. M. Leibert,	Bethlehem,	Northampton.
Roscoe H. Smith,	Chapman Quarries,	Northampton.
Harrison Fox,	East Bangor,	Northampton.
William J. Gross,	Freemansburg,	Northampton.
O. F. Kelchner,	Easton,	Northampton.
Elmer A. Eckert,	Hellertown,	Northampton.
Dr. J. A. Fraunfelder,	Nazareth,	Northampton.
Mrs. Mary C. Swartz,	Pen Argyl,	Northampton.
Dr. C. E. Beck,	Portland,	Northampton.
Silas B. Keener,	South Bethlehem,	Northampton.
Francis W. Messenger,	Tatamy,	Northampton.
William Loyley,	Easton, Station 1,	Northampton.
C. A. Daniel,	Wind Gap,	Northampton.
J. H. Warner,	Easton,	Northampton.
O. J. Kleintop,	Walnutport,	Northampton.
Edward W. Weaver,	South Bethlehem,	Northampton.

Local Registrars—Cont'd.

Local Registrar.	Post Office Address.	County.
Henry E. Woodring,	Stockertown,	Northampton.
N. J. Steinhilber,	Catasauqua,	Northampton.
F. H. Stetler,	Northampton,	Northampton.
G. R. Wesner,	McEwensville,	Northumberland.
Dr. J. A. Clinger,	Milton,	Northumberland.
P. W. Hoffman,	Mount Carmel,	Northumberland.
Dr. Stoddard S. Berg,	Northumberland,	Northumberland.
R. B. Bird,	Itiverside,	Northumberland.
T. C. Roberts,	Shamokin,	Northumberland.
Ferry C. Klase,	Snydertown,	Northumberland.
E. F. Heckert,	Sunbury,	Northumberland.
E. L. Lyons,	Tarbotville,	Northumberland.
Dr. W. G. Marsh,	Watsonstown,	Northumberland.
D. E. Baum,	Herndon,	Northumberland.
Dr. J. S. Mengel,	Trevorton,	Northumberland.
George P. Heck,	P. O. Keiser,	Northumberland.
Reuben H. Kell,	Blain,	Perry.
D. C. Kell,	New Bloomfield,	Perry.
David Boyd,	Duncannon,	Perry.
D. B. Dromgold,	Landisburg,	Perry.
Dr. William G. Morris,	Liverpool,	Perry.
Dr. E. W. Snyder,	Marysville,	Perry.
James Rounsley,	Millerstown,	Perry.
Amos A. Ober,	New Buffalo,	Perry.
Frank H. Zinn,	Newport,	Perry.
H. A. Johnson,	Ikesburg,	Perry.
George W. Atherholt,*	Philadelphia, City Hall,	Philadelphia.
Neva R. Deardorff,	Philadelphia, City Hall,	Philadelphia.
J. H. Van Etten,	Milford,	Pike.
John W. Kilsby,	Dingman's Ferry,	Pike.
J. E. Dodan,	Lackawaxan,	Pike.
B. F. Killam,	Paupack,	Pike.
A. W. Balch,	Matamoras,	Pike.
George W. Sterner,	Austin,	Potter.
Roy L. Orcutt,	Coudersport,	Potter.
E. M. Dickinson,	Galeton,	Potter.
Homer K. Lane,	Ulysses,	Potter.
Russell Wilson,	Cross Fork,	Potter.
F. P. Nichols,	Shingle House,	Potter.
Mrs. Emma E. Courtright,	Genesee,	Potter.
Fred H. Hoose,	Roulette,	Potter.
A. Crittenden,	Oswaya,	Potter.
John F. Dence,	Ashland,	Schuylkill.
Frank L. Brown,	Auburn,	Schuylkill.
J. W. Smith,	Cressona,	Schuylkill.
Maurice Heywood,	Frackville,	Schuylkill.
John J. Moran,	Mahanoy Plane,	Schuylkill.
Dr. W. J. Monaghan,	Girardville,	Schuylkill.
W. S. Drumheller,	Landingville,	Schuylkill.
Dr. L. G. Wetterau,	McAdoo,	Schuylkill.
James H. Kirchner,	Mahanoy City,	Schuylkill.
J. Nelson Basler,	Middleport,	Schuylkill.
John H. Phillips,	Minersville,	Schuylkill.
P. S. Canfield,	Silvercreek,	Schuylkill.
Dr. Geo. S. Marberger,	New Ringgold,	Schuylkill.
W. H. Edwards,	Orwigsburg,	Schuylkill.
F. J. O'Connor,	Pottsville,	Schuylkill.
Harry W. Boltz,	Pine Grove,	Schuylkill.
G. W. Runkle,	Port Carbon,	Schuylkill.
Dr. H. J. Herbels,	Pottsville,	Schuylkill.
Harry W. Brown,	St. Clair,	Schuylkill.
C. A. Moyer,	Schuylkill Haven,	Schuylkill.
Thornton M. Stout,	Sheandoah,	Schuylkill.
Jessie R. Little,	Tamaqua,	Schuylkill.
W. F. Knecht,	Tower City,	Schuylkill.
Dr. J. W. Schultz,	Tremont,	Schuylkill.
H. F. Hartman,	Ringtown,	Schuylkill.
Richard G. Edwards,	Coaldale,	Schuylkill.
Guy Hubler,	Gordon,	Schuylkill.
W. F. Horn,	Sheppton,	Schuylkill.
Dr. E. R. Decker,	Selinsgrove,	Snyder.
H. H. Cassler,	Hollsopple,	Somerset.
Dr. R. J. Hefley,*	Berlin,	Somerset.
Grace Engle,	Berlin,	Somerset.
H. Reid Welmer,	Cassleman,	Somerset.
Dr. W. S. Mountain,	Confluence,	Somerset.
Dr. R. T. Pollard,	Garrett,	Somerset.
Irvin P. Dull,	Hooversville,	Somerset.

Local Registrars—Cont'd.

Local Registrar.	Post Office Address.	County.
J. H. Judy,	Jennerstown,	Somerset.
W. H. Hay,	Meyersdale,	Somerset.
D. J. Wolfersberger,	Rockwood,	Somerset.
Harvey Hay,	Elklick,	Somerset.
C. H. Springer,	Somerfield,	Somerset.
William B. Shafer,	Somerset,	Somerset.
Edward Smith,	Stoyestown,	Somerset.
LeRoy Forquer,	Ursina,	Somerset.
J. J. Kennell,	Wellersburg,	Somerset.
Mrs. Sevilla Geiger,	Sand Patch,	Somerset.
Mrs. Mary S. Colborn,	Windber,	Somerset.
C. A. Caldwell,*	Scalp Level,	Somerset.
M. R. Hoffman,	Scalp Level,	Somerset.
F. E. Straub,	New Baltimore,	Somerset.
C. F. Livengood,	Boswell,	Somerset.
Dr. P. G. Biddle,	Dushore,	Sullivan.
R. D. Kebrer,	Eagles Mere,	Sullivan.
James C. Caven,	Laporte,	Sullivan.
M. R. Black,	Forksville, R. D. No. 1,	Sullivan.
A. A. Richardson,	Dandaff,	Susquehanna.
L. H. May,	Forest City,	Susquehanna.
William T. Moran,	Friendsville,	Susquehanna.
Dr. A. S. Blair,	Hallstead,	Susquehanna.
N. M. Finn,	Hopbottom,	Susquehanna.
G. A. Taylor,	Lanesboro,	Susquehanna.
Harry E. Taylor,	Montrose,	Susquehanna.
H. J. Tiffany,	New Milford,	Susquehanna.
William Johnston,*	Oakland,	Susquehanna.
Emma Johnston,	Oakland,	Susquehanna.
D. J. Lynch,	Susquehanna,	Susquehanna.
W. I. Morgan,	Uniondale,	Susquehanna.
Dr. Homer B. Lathrop,	Springville,	Susquehanna.
E. B. Beardslee,	Little Meadows,	Susquehanna.
M. A. Kilrow,	Great Bend,	Susquehanna.
Hosmer T. Wright,	Thompson,	Susquehanna.
J. D. Burr,	Blossburg,	Tioga.
M. L. Browne,	Covington,	Tioga.
J. W. Bergin,	Elkland,	Tioga.
Dr. Edwin E. Clark,	Knoxville,	Tioga.
J. H. Putnam,	Lawrenceville,	Tioga.
Isaac F. Wheeland,	Liberty,	Tioga.
Frank W. Clark,	Mansfield,	Tioga.
A. M. Van Zile,	Osceola,	Tioga.
L. E. Stevens,	Rutland,	Tioga.
C. H. Cornelius,	Tioga,	Tioga.
Norman E. Leslie,	Wellsboro,	Tioga.
Orville S. Kimball,	Westfield,	Tioga.
Dr. Harry W. Howland,	Gaines,	Tioga.
R. J. Blackwell,	Lloyd,	Tioga.
J. R. Slayman,	Hartleton,	Union.
T. C. Thornton,	Lewisburg,	Union.
John A. Beard,	Millinburg,	Union.
J. D. Maize,	New Berlin,	Union.
Victoria Brown,	Allenwood,	Union.
Dr. C. E. Imbrie,	Clintonville,	Venango.
B. T. Grove,	Cooperstown,	Venango.
William E. Widel, Sr.,*	Emlenton,	Venango.
Silas Crisswell,	Emlenton,	Venango.
H. C. Zeamer,	Pleasantville,	Venango.
W. B. Hays,*	Polk,	Venango.
Newell Hays,	Polk,	Venango.
Edyth G. Tyler,	Rouseville,	Venango.
Dr. F. M. McClelland,	Utica,	Venango.
J. T. Fahey,	Oil City,	Venango.
E. Borland,	Franklin,	Venango.
Dr. Frank C. Willard,	North Clarendon,	Warren.
Mrs. Archie J. Damon,	Columbus,	Warren.
Charles Brown,	Columbus,	Warren.
H. Mosher,	Grand Valley,	Warren.
E. T. Mouris,	Tidioute,	Warren.
Dr. C. W. Schmehl,	Warren,	Warren.
Dr. J. J. Knapp,	Youngsville,	Warren.
C. E. Martin,	Sheffield,	Warren.
J. E. Tuttle,	Kinzua,	Warren.
Carl L. Rosen,	Garland,	Warren.
A. M. McDonald,	Sugar Grove,	Warren.
Dr. H. J. Phillips,	Bear Lake,	Warren.

Local Registrars—Cont'd.

Local Registrar.	Post Office Address.	County.
Jess P. Miller,	Beallsville,	Washington.
W. F. Richardson,	Bentleyville,	Washington.
Mrs. J. C. White,	South Burgettstown,	Washington.
Walter J. Weaver,	California,	Washington.
Dr. A. L. Runion,	Canonsburg,	Washington.
Charles E. Brashear,	West Brownsville, R. D. No. 1,	Washington.
Dr. Edwin McKay,	Charleroi,	Washington.
Dr. C. C. Cracraft,	Claysville,	Washington.
D. J. Frantz,	Coal Center,	Washington.
C. M. Ruple,*	Washington,	Washington.
John W. Vester,*	Washington,	Washington.
W. G. Nease,	Washington,	Washington.
D. P. McKenna,	Elco,	Washington.
J. R. Curry,	Finleyville,	Washington.
E. I. Worrell,	Speers, R. D. No. 1,	Washington.
W. J. Speer,	McDonald,	Washington.
S. W. Sharpneck,	P. O. Lock No. 4,	Washington.
John H. Kittle,	Speers,	Washington.
Joshua Laugham,	Stockdale,	Washington.
J. D. France,	West Middletown,	Washington.
Dr. C. B. Wood,	Monongahela,	Washington.
Henry Eaton,	Midway,	Washington.
E. E. French,	Bentleyville,	Washington.
Joseph T. S. Cowen,	Roscoe,	Washington.
Sherman Conaway,*	Elco,	Washington.
E. B. Wells,	West Brownsville,	Washington.
Dr. J. A. Sprowls,	Donora,	Washington.
Dr. Louis B. Nielsen,	Honesdale,	Wayne.
W. C. Knapp,	Hawley,	Wayne.
J. K. Stearns,	Starrucca,	Wayne.
C. H. Stephenson,	Waymart,	Wayne.
Dr. O. J. Mullen,	Hamlin,	Wayne.
John Barrett,	Equinunk,	Wayne.
A. V. Tyler,	Damascus,	Wayne.
J. J. Kline,	Adamsburg,	Westmoreland.
Mrs. W. J. Hawk,	Arnold,	Westmoreland.
S. G. Veitch,	Arona,	Westmoreland.
J. S. Strawn,	Avonmore,	Westmoreland.
W. M. Wynn,	Bolivar,	Westmoreland.
J. S. Brubaker,	Cokeville,	Westmoreland.
Dr. B. Haughwout,	Derry Station,	Westmoreland.
George W. Stough,	Stahlstown,	Westmoreland.
S. A. Clements,	Greensburg,	Westmoreland.
C. C. Rodgers,	Irwin,	Westmoreland.
Theodore B. Shank,	Jeannette,	Westmoreland.
W. T. Osborne,	Latrobe,	Westmoreland.
Dr. D. E. Beltz,	Ligonier,	Westmoreland.
Miss Emma J. Russell,	Livermore,	Westmoreland.
W. H. Bowers,	Madison,	Westmoreland.
A. L. Arner,	Monessen,	Westmoreland.
S. C. Stevenson,	Mt. Pleasant,	Westmoreland.
Miss Margaret L. Rugh,	New Alexandria,	Westmoreland.
S. S. Ulerich,	New Florence,	Westmoreland.
Dr. A. J. Bearer,	New Kensington,	Westmoreland.
Harry Stotler,	Delmont,	Westmoreland.
W. S. Clarke,	Seward,	Westmoreland.
J. B. Smith,	Penns Station,	Westmoreland.
Dr. N. E. Silsley,	Scottdale,	Westmoreland.
J. W. B. Stewart,	Greensburg,	Westmoreland.
C. A. Kley,	Greensburg,	Westmoreland.
W. W. Poorman,	Vandergriff,	Westmoreland.
M. L. Griffin,	Vandergriff Heights,	Westmoreland.
A. T. Darr,	West Newton,	Westmoreland.
D. B. Hoffman,	Youngstown,	Westmoreland.
H. R. Detrick,	Stewart's Station,	Westmoreland.
N. E. Rhoades,	Smithton,	Westmoreland.
Dr. J. H. Richle,	Suterville,	Westmoreland.
Joseph Schell,	Export,	Westmoreland.
Dr. A. H. Caven,	Youngwood,	Westmoreland.
J. F. McWilliams,	Manor,	Westmoreland.
A. N. Bowers,*	Hyde Park,	Westmoreland.
J. G. Alter,	Parnassus,	Westmoreland.
G. W. Kirkland,	Hyde Park,	Westmoreland.
Earl Sisson,	Factoryville,	Wyoming.
M. R. Conrad,	Nicholson,	Wyoming.
H. M. Lewis,	Tunkhannock,	Wyoming.
C. J. Phoenix,	Noxen,	Wyoming.
George A. Carter,	Meshoppen,	Wyoming.
J. O. Turner,	Falls,	Wyoming.
C. B. Pickett,	Laceyville,	Wyoming.

Local Registrars—Cont'd.

Local Registrar.	Post Office Address.	County.
Joseph Shaul,	Felton, R. D.,	York.
I. H. Rojahn,	Dallastown,	York.
Samuel H. Klugh,	Dillsburg,	York.
Dr. N. C. Wallace,	Dover,	York.
Dr. N. Allen Overmiller,	East Prospect,	York.
J. Walter Brooks,	Fawn Grove,	York.
Samuel S. Grove,	Felton,	York.
O. A. Hoffman,	Franklintown,	York.
John B. Zigner,	Etters,	York.
F. Y. Stambaugh,	Hanover,	York.
J. C. Brodbeck,	Codorus,	York.
Dr. Harry Spangler,	Lewisberry,	York.
Dr. C. G. Hildebrand,	Loganville,	York.
W. H. Everhart,	Manchester,	York.
John E. Lowe,	New Freedom,	York.
H. William Schwartz,	York New Salem,	York.
W. D. Landis,	York, Station 3,	York.
T. H. Hoffacker,	Railroad,	York.
D. Frank Waltreider,	Red Lion,	York.
Dr. G. M. Ficks,	Seven Valleys,	York.
William F. Meyers,	Shrewsbury,	York.
Dr. G. W. Bahn,	Spring Forge,	York.
W. G. Fulton,	Stewartstown,	York.
S. A. Fitzgerald,	Wellsville,	York.
Jacob F. Bortner,	Red Lion, R. D. No. 2,	York.
William H. Flora,	Wrightsville,	York.
Charles Stump,	Yoe,	York.
Dr. R. A. Hildebrand,	Glen Rock,	York.
Charles M. Stauffer,	York,	York.
Frank Eyster,	LaBott,	York.
Charles G. Elicker,	Rossville,	York.
Dr. J. H. Bennett,	York,	York.
Dr. J. C. Murphy,	York Haven,	York.
J. Howard Stubbs,	Delta,	York.
John W. Gable,	Hellam,	York.
Dr. R. S. Stahle,	York R. D. No. 8,	York.
Charles Koplin,	Airville,	York.
J. Allen Melhorn,	Mount Wolf,	York.
Dr. M. R. Girvin,	Airville,	York.
K. E. Beard,	Brogueville,	York.
A. F. Grim,	Windsor,	York.

*Retired.

DIVISION OF LABORATORIES AND EXPERIMENTAL STATION.

Director of Laboratories, James B. Rucker, Jr., M. D.,
Lansdowne, Delaware County.

Bacteriologist, Alexander Garcia, Philadelphia.

Pathologist, Frederick C. Narr, M. D., Philadelphia.

Technical Assistant, Hervey L. Bates, M. D., Germantown, Philadelphia.

Serologist, Henry M. Wise, M. D., Philadelphia.

Stenographers—Miss Daisy B. Gery, Philadelphia.

Miss Estelle L. Hecht, Philadelphia.

Clerks—Mrs. Mary G. Andress, Philadelphia.

Miss Amy E. Engelbert,* Philadelphia.

Miss Ethel Miller, Philadelphia.

Miss Erma R. Staley, Philadelphia.

Miss Margaret H. Coombe, Philadelphia.

Miss Helen Gunderson, Philadelphia.

Helpers—Leon J. Harris, Philadelphia.
 Calvin Harris, Philadelphia.
 Andrew Keenan, Philadelphia.
 Lewis Brown, Philadelphia.
 Miss Rosalie Harris, Philadelphia.

*Resigned.

DIVISION FOR THE CONTROL OF TUBERCULOSIS.

SUBDIVISION OF TUBERCULOSIS DISPENSARIES.

EXECUTIVE STAFF.

*Medical Inspector of Dispensaries, *Thomas H. A. Stites, M. D.,*
 Scranton, Lackawanna County.
Karl Schäfte, M. D., (Acting),
 Philadelphia.

Deputy Medical Inspector of Dispensaries:

†Edward B. Shellenberger, M. D., Warren, Warren County.

Frank F. D. Reckord, M. D., Harrisburg, Dauphin County.

Lecturer and Manager, Tuberculosis Exhibit—William C. Miller, M. D., Bedford,
 Bedford County.

Statistical Inspector—Percival Herman, M. D., Kratzerville, Snyder County.

Chief Visiting Dispensary Nurse—Miss Alice M. O'Halloran, Philadelphia.

Assistant Chief Visiting Dispensary Nurse—Miss Margaret C. Parsons, Philadelphia.

Stenographers—Miss Olive E. Jamison, Ingram, Allegheny County.

Miss Florence L. Flyte, Williamsport, Lycoming County.

Miss Margaret McGannon, Punxsutawney, Jefferson County.

Clerks—Mrs. Linnie K. Hiestler, Harrisburg, Dauphin County.

Miss Anna M. Hartley, Bloomsburg, Columbia County.

Miss Alma G. Ernest, Mifflintown, Juniata County.

Assistants with Tuberculosis Exhibit:

William M. Colvin, Bedford, Bedford County.

Miss Ida J. Lockett, (Nurse), Frackville, Schuylkill County.

*Appointed Medical Director of Hamburg State Sanatorium. †Retired.

TUBERCULOSIS DISPENSARIES.

LOCATIONS, PHYSICIANS, AND NURSES IN 1914.

O Physician in charge. AC Acting Physician in charge. †Deceased. *Retired. §Transferred.
 ‡Attached to more than one Dispensary. x Promotion. s Substitute Assistant Physician with pay.
 aC Associate Physician in charge. H. O. Township Health Officer.

County.	Place.	Physicians.	Nurses and Clerks.
Adams,	Gettysburg,	Dr. J. R. Dickson, C	†Miss Florence Matthews.
Allegheny,	Braddock,	Dr. F. K. Whitfield, C	Miss Lola A. Flenner.
	Homestead,	Dr. A. P. Fogelman, C	†Miss Jessie G. Barclay.
	McKeesport,	Dr. D. P. Blose, C	Miss Belle Beattie.
		Dr. W. H. Leifler,	
	Pittsburgh,	Dr. S. M. Rinehart, C	Miss N. C. Negley. Miss Flora Graham. Miss Laura Moyes. Miss Laurena Boyd. Miss Elizabeth Holmes. Miss Ophelia Rush. †Miss Jessie G. Barclay. § Miss Marie Williamson.* Miss Louise E. Koenig.* Miss Sara K. Trimble. Mrs. Carrie P. Butler. Miss Alice K. Negley (Clerk.) Miss Marjorie Stewart (Clerk.)
Tarentum,	Dr. W. A. Arnold, C	Miss Nora P. Hurst.	
	Wilkinsburg,	Dr. F. W. Silsby,	
		Dr. J. M. McNall, C	Miss Gertrude Hall. Miss Blanche MaWhinney.
Armstrong,	Kittanning,	Dr. T. N. McKee, C	Miss Viola C. Lawson.
Beaver,	Beaver Falls,	Dr. L. D. Allison,	
	Rochester,	Dr. Bruce H. Snodgrass, C ..	†Miss Alice M. Nicely.
Bedford,		Dr. Boyd B. Snodgrass, C ..	†Miss Alice M. Nicely.
	Everett,	Dr. W. de la M. Hill, C	†Miss Mary Sullivan.
Berks,	Hamburg,	Dr. Thomas H. A. Stites, C	Miss Ella R. Reed.
	Reading,	Dr. Israel Cleaver, C	Miss Anna M. Lafferty.
Blair,		Dr. Charles P. Henry,	
	Altoona,	Dr. Walter M. Bertolet,	
		Dr. J. D. Findley, C	Miss I. Mae Wharton.
		Dr. E. B. Miller,	
	Tyrone,	Dr. A. S. Kech,	
Bradford,		Dr. W. S. Musser, C	†Miss Frances Swope.* †Miss Mayme Peck.
	Towanda,	Dr. T. Ben Johnson, Jr., C	†Miss Lois Lilley. Miss Nellie Schuman (Clerk.)
Bucks,	Bristol,		Miss L. Gillick.
	Doylestown,	Dr. J. de B. Abbott, C	†Miss Elizabeth Hilkert.
Butler,		Dr. I. S. Plymire, C	
	Butler,	Dr. H. D. Hoekenberry, C	Miss Kate Brady.
Cambria,		Dr. H. P. St. Clair,	
	Cresson,	Dr. W. G. Turnbull, C	Miss Eliza C. Allison.
	Hastings,	Dr. D. S. Rice, C	Miss Nell Murphy.
	Johnstown,	Dr. W. E. Matthews, C	Miss Katharine Hughes. Miss Anna Sullivan. Miss Bess M. Hepburn. Miss Minnie Matthews (Clerk.)
		Dr. H. F. Tomb,	
		Dr. C. M. Harris,	
		Dr. D. P. Ray,*	
		Dr. R. C. Davis, s	

TUBERCULOSIS DISPENSARIES—Continued.

County.	Place.	Physicians.	Nurses and Clerks.		
Cameron,	Emporium,	Dr. H. S. Falk, C	‡Miss Edith Bottorf.		
Carbon,	Lansford,	Dr. G. P. Hill, C	‡Miss Ada Riebe.		
	Mauch Chunk,	Dr. E. G. Bray, C	‡Miss Ada Riebe.		
Centre,	Bellefonte,	Dr. S. M. Huff, C	‡Miss Frances M. Swope.* ‡Miss Mayme Peck.		
	Philipsburg,	Dr. C. E. McGirk, C	Miss Margaret Stevenson.		
Chester,	Coatesville,	Dr. E. A. Graves, C	Miss Ruth Paxson.		
	Phoenixville,	Dr. S. A. Rulon, C	‡Miss Gertrude Raup.		
	West Chester,	Dr. J. Scattergood, C	‡Miss Gertrude Raup.		
Clarion,	Clarion,	Dr. J. T. Rimer, C*	Miss Nettie B. Campbell		
		Dr. F. P. Phillips, C	(Clerk.)* Miss Salome M. Snyder (Clerk.)		
Clearfield,	Clearfield,	Dr. S. C. Stewart, C	Miss Elizabeth Williams.		
	DuBois,	Dr. R. R. Jordan, C	‡Miss Sara Dunsmore.		
Clinton,	Lock Haven,	Dr. R. B. Watson, C	‡Miss Frances Swope.* ‡Miss Mayme Peck.		
	Renovo,	Dr. C. L. Fullmer, C	‡Miss Edith Bottorf.		
	Berwick,	Dr. S. B. Arment, C	Miss Rhetta Follmer.		
Columbia,	Berwick,	Dr. S. B. Arment, C	Miss Rhetta Follmer.		
Crawford,	Meadville,	Dr. J. K. Roberts, C	Miss Margaret McMahon.*		
		Dr. W. E. Hyskell,	‡Miss Emma Watts.* ‡Miss Anna Prather.		
	Titusville,	Dr. C. E. Spicer, C	‡Miss Anna Grate.‡ ‡Miss Rosa McClintock.‡* ‡Miss Sara A. Crooks.		
Cumberland,	Carlisle,	Dr. H. B. Bashore, C†	‡Miss Lucy Shellenberger.		
		Dr. E. R. Plank,			
	West Fairview,	Dr. H. B. Bashore, C†	‡Miss Lucy Shellenberger.		
Dauphin,	Harrisburg,	Dr. P. A. Hartman, C†	Miss Sara Butler.		
		Dr. C. R. Phillips, xC	Miss Helen J. Roth.		
		Dr. A. L. Shearer,*	Miss Blanche Yowler.		
		Dr. W. T. Douglass,	Miss Jessie McClure.		
		Dr. H. H. Farnsler, x	Miss Anna P. Kutzer.*		
		Dr. C. E. L. Keene,	Miss Bertha Brown.		
		Dr. C. J. B. Flowers,	Miss Frankford Lewis.		
	Dr. J. W. MacMullen, x	Miss Bess Johns. Miss Katharine Miller (Clerk.) Miss Annie Miller (Clerk.)			
	Lykens,	Dr. M. D. Lehr, C	Dr. J. A. Keiter (Clerk.)		
Delaware,	Chester,	Dr. J. W. Wood, C	Miss Julia C. Dalton.		
		Dr. M. A. Neufeld,	Miss Katharine Donnelly.		
		Dr. J. S. Eynon,	Mrs. K. Worthington. Miss Helen Hanley (Clerk.)		
Elk,	Ridgway,	Dr. J. G. Flynn, C	‡Miss Sara Dunsmore.		
Erie,	Corry,	Dr. C. B. Kibler, C	‡Miss Sara A. Crooks.‡ ‡Miss E. M. Hartleb. ‡Miss Susan McPeely.		
			Erie,	Dr. J. W. Wright, C	‡Miss E. M. Hartleb.
				Dr. A. H. Roth,	‡Miss Susan McPeely.
Fayette,	Brownsville,	Dr. L. N. Reichard, C*	‡Miss Flora Wilson.*		
		Dr. F. S. Hoover, C	‡Miss Mary Allen.		
	Connellsville,	Dr. T. B. Echard, C	‡Miss Mary Allen.		
	Uniontown,	Dr. O. R. Altman, C	‡Miss Mary Allen.		
Forest		Dr. F. J. Boyard, C	‡Miss Sara A. Crooks.		

NINTH ANNUAL REPORT OF THE
TUBERCULOSIS DISPENSARIES—Continued.

County.	Place.	Physicians.	Nurses and Clerks.
Franklin,	Chambersburg,	Dr. H. X. Bonbrake, C† Dr. Paul P. Allen, AC	†Miss Florence Matthews.
	Waynesboro,	Dr. W. C. Schultz, C	†Miss Florence Matthews.
Fulton,	McConnellsburg, ..	Dr. J. W. Mosser, C	H. O.
Greene,	Waynesburg,	Dr. J. T. Iams, C	†Miss Jennie M. Riles.
Huntingdon,	Huntingdon,	Dr. H. C. Frontz, C	Miss Julia Black.
Indiana,	Indiana,	Dr. W. A. Simpson, C	†Miss Carrie A. Hensel.
Jefferson,	Brookville,	Dr. J. A. Haven, C	†Miss Carrie A. Hensel.
	Punxsutawney,	Dr. S. M. Beyer, C	†Miss Carrie A. Hensel.
Juniata,	Mifflintown,	Dr. W. H. Banks, C	Miss Elsa Auker.
Lackawanna, ..	Carbondale,	Dr. W. J. Lowry, C	†Miss Alice M. Chubb.*
	Scranton,	Dr. J. C. Reifsnyder, C Dr. C. Falkowsky,	Miss Reba Tucker. Miss Carolyn E. Ellwanger.
Lancaster,	Columbia,	Dr. J. D. Kennedy, C*	†Miss Elsie Hatfield.
	Lancaster,	Dr. Richard Reeser, C	Miss Clara Henrich. †Miss Elsie B. Hatfield. Miss Janet Landis (Clerk.)
Lawrence,	New Castle,	Dr. J. L. Mowery, C	Miss Kathryn Shepard.*
		Dr. H. C. Kinzer, *	Miss Della A. Glenn.
Lebanon,	Lebanon,	Dr. J. D. Moore, C	Miss Carolyn M. Anthony.*
		Dr. H. E. Maulfair,	Miss Mary E. S. Miller.* Miss Margaret Fothergill. Miss Mary E. Brua. Mr. Robert A. Brandt (Clerk)
Lehigh,	Allentown,	Dr. A. J. Riegel, C	Miss Louise Tritschler.
		Dr. H. E. Maulfair,	†Mrs. Jane P. Miller.‡
Luzerne,	Hazleton,	Dr. W. L. Hutchison, AC Dr. J. W. Leckie,	Miss Marion Good.
	Nanticoke,	Dr. C. E. Bennett, C	Miss Bertha M. Morgan.
	Pittston,	Dr. S. L. Underwood, C	Miss Mary G. Maloney.*
	Wilkes-Barre,	Dr. H. L. Ransom,	Miss Minnie Frey.
		Dr. C. H. Miner, C	Miss Emily G. Jones. Mrs. Ethna Silvera. Miss Emma Blackwell. Miss Emily H. Lewis. Miss Lida Tucker. Miss Ella B. Featherstone. Miss Nellie C. Loftus. Miss Mary Burns. Miss Helen Masterson (Clerk)
Lycoming,	Williamsport,	Dr. G. W. Geist,	Miss Annie Gorman.
		Dr. S. Reichard,	Miss Jennie Simmons.
McKean,	Bradford,	Dr. W. F. Trainor,	
	Kane,	Dr. W. C. Hogan, C*	H. O.
Mercer,	Sharon,	Dr. Wade Paton, C	†Miss Sara A. Crooks.
		Dr. L. W. Dana, C	†Miss Emma Watts.* †Miss Anna Prather.
Mifflin,	Lewistown,	Dr. P. P. Fisher, C	Miss E. L. Felker.
Monroe,	Stroudsburg,	Dr. C. H. Brisbin, C	†Mrs. Jane P. Miller.
		Dr. W. L. Angle, C	

TUBERCULOSIS DISPENSARIES—Continued.

County.	Place.	Physicians.	Nurses and Clerks.
Montgomery, ...	Ardmore,	Dr. A. H. Davison, C	‡Mrs. Florence Peter.
	Jenkintown,	Dr. W. B. Jameson, C	‡Miss Elizabeth Hilbert.
	Norristown,	Dr. H. H. Whitcomb, C	‡Miss Lillian Brown.
	Pottstown,	Dr. C. H. Mann,	‡Miss Lillian Brown.
Montour,	Danville,	Dr. T. E. Wills, C	‡Miss Mary G. Connelly.*
		Dr. Cameron Shultz, C	‡Miss Elda Graybill.
Northampton, ...	Bangor,	Dr. A. A. Seem, C	‡Mrs. Jane P. Miller.
	Easton,	Dr. E. M. Green, C	Miss Elizabeth R. Miller.
		Dr. T. C. Zwick, aC	Miss Marion Thomas (Clerk)
		Dr. W. P. Thomason,	
		Dr. W. H. McElhanev,	
		Dr. J. E. Fretz,	
	S. Bethlehem,	Dr. W. D. Chase, C	Miss Katharine E. Lynch.
Northumberland,	Milton,	Dr. R. B. Tule, C	‡Miss Sara Smith.
	Mt. Carmel,	Dr. W. T. Williams, C	Miss Emma H. Clemence.
		Dr. T. L. Williams,	Miss Clara P. Larzelere.
	Shamokin,	Dr. R. H. Simmons, C	Miss Marie E. Wittig.
		Dr. C. M. Malone,	Miss Eva Rebeck.
	Sunbury,	Dr. J. B. Cressinger, C	Miss Anna Hileman.
Perry,	New Bloomfield, ...	Dr. A. R. Johnston, C	H. O.
Philadelphia, ..	Philadelphia, 1731 Orthodox St., (Frankford.)	Dr. E. J. Murphy, C	Miss Effie M. Hooney.
		Dr. F. A. Murphy,	Miss Florence Phillips.
		Dr. Benjamin Robinson, ...	Miss Mary A. Doyle.
	Philadelphia, 1630 Poplar St.	Dr. A. P. Francine, C	Miss Margaret G. Flynn.
	Dr. R. G. Torrey,	Miss Ida M. Swartz.	
	Dr. Karl Schiffler, n§	Miss Blanche Hayes.	
	Dr. B. L. Singer,	Miss Helen Armstrong.	
	Dr. Charles Weber,*	Miss Mae Richards.	
	Dr. A. Seth Brumm,	Miss Mary H. Hendrie (Clerk.)	
	Dr. J. P. Frantz, x	Miss H. Clair Bruno (Clerk)	
	Dr. LeRoy A. Wilkes,		
	Dr. Isaac H. Jones,		
	Dr. C. H. Grimes,		
	Philadelphia, 1126 S. 26th St.	Dr. S. J. Repplier, C	Miss Hannah P. Guthrie.*
		Dr. C. M. Montgomery,	Miss Ida E. Tinsley.
		Dr. B. A. McDermott, §	Miss Evelyn Fry.
		Dr. Henry Parrish,	Mrs. C. A. Wordinger.*
		Dr. A. T. McVerney,	Miss Mary E. Walsh.
			‡Mrs. Florence Peter.
			Miss Eleanor Caffrey.
			Miss Mary F. Bryan (Clerk.)*
			Miss Agnes Sonder (Clerk.)
Pike,	Milford,	Dr. W. B. Kenworthy, C	H. O.
Potter,	Condersport,	Dr. E. H. Asheroft, C	H. O.
Schuylkill,	Pottsville,	Dr. L. T. Kennedy, C	Miss Clara Kantner.
		Dr. G. H. Boyer,	Miss Alberta Schwarze.
		Dr. J. L. Warne,*	Mr. S. M. Evans (Clerk.)
		Dr. James B. Heller,	
	Shenandoah,	Dr. H. M. Wasley, C	Miss Veronica D. Kazake- vlez.
		Dr. C. Grubler,	Miss Lucy Sheehy.
			Miss Margaret Okewlez (Clerk.)
	Tamaqua,	Dr. E. E. Shifferstine, C*	‡Miss Ada Riebe.
		Dr. Fred B. Harding, AC	
Snyder,	Sellsgrove,	Dr. H. F. Wagenseller, C	‡Miss Mary G. Connelly.*
			‡Miss Elda Graybill.
Somerset,	Meyersdale,	Dr. C. P. Large, C	‡Miss Mary Sullivan.

TUBERCULOSIS DISPENSARIES—Continued.

County.	Place.	Physicians.	Nurses and Clerks.
Sullivan,	Dushore,	Dr. P. G. Biddle,C	‡Miss Lois Lilley.
Susquehanna, ...	Montrose,	Dr. J. G. Wilson,C	‡Mrs. Clementine VanAuken.
	Susquehanna,	Dr. D. J. Peck,AC	‡Mrs. Clementine VanAuken.
Tioga,	Tioga, closed November 14, 1914.	Dr. S. P. Hakes,C*	H. O.
	Wellsboro,	Dr. C. W. Webb,AC	H. O.
Union,	Mifflinburg,	Dr. C. H. Dimm,C	‡Miss Sara Smith.
Venango,	Franklin,	Dr. H. F. McDowell,C	Mrs. Catherine B. Sawyer.
	Oil City,	Dr. J. P. Strayer,C	‡Miss Anna Grafe. ‡Miss Rosa McClintock.* Miss Helena O'Hara.
Warren,	Warren,	Dr. C. W. Schmehl,C	‡Miss Sara A. Crooks.
Washington, ...	Mouongahela,	Dr. C. B. Wood,C	‡Miss Flora Wilson.* ‡Miss Alice Nicely.
	Washington,	Dr. E. M. Hazlett,C	Miss Angeline White. ‡Miss Jennie N. Riles.
Wayne,	Honesdale,	Dr. L. B. Nielsen,C	‡Miss Alice M. Chubb.*
Westmoreland, .	Greensburg,	Dr. I. M. Portser,C	‡Miss Caroline Kline.
	Mt. Pleasant,	Dr. M. W. Horner,C	‡Miss Caroline Kline.
	Monessen,	Dr. M. J. Cramer,C	Miss Marie Watson.
Wyoming,	Tunkhannock,	Dr. H. L. McKown,C	Miss Jessie L. Ross.
York,	Hanover,	Dr. J. H. Bittinger,C	Miss Agnes M. Martin. Mr. F. Y. Stambaugh (Clerk.)
		Dr. H. M. Alleman,	
	York,	Dr. J. S. Miller,C	Mrs. Elizabeth Fink. Miss Helen Miller. Miss Mina Keller (Clerk.)
		Dr. Roland Jessop,	
		Dr. H. D. Smyser,	
		Dr. L. M. Hartman,	
		Dr. B. F. Parker,	
		Dr. L. S. Weaver,	
		Dr. R. W. Shirey,	
		Dr. W. C. Smith,	

SUBDIVISION OF TUBERCULOSIS SANATORIA.

PENNSYLVANIA STATE SANATORIUM FOR TUBERCULOSIS NO. 1,
MONT ALTO.

Medical Director, Fred. C. Johnson, M. D.,
Bradford, McKean County.

Deputy Medical Director, John Berry, M. D., Philadelphia.

First Assistant Physician, William T. Davies, M. D., Bradford, McKean County.
Assistant Physicians.

Joseph Aaronoff, M. D., Philadelphia.

Henry A. Carskadden, M. D., Williamsport, Lycoming County.

George W. Farquhar, M. D., Pottsville, Schuylkill County.

William M. Gay, M. D., Windsor, Vermont.

Henry A. Gorman, M. D., Philadelphia.

*Samuel C. Jaspán, M. D., Philadelphia.
 Joseph A. Stockler, M. D., Philadelphia.
 Samuel A. Silk, M. D., Philadelphia.
 Herman Schlaff, M. D., Philadelphia.
 Thomas A. Stevens, M. D., Baltimore, Maryland.
 Leon J. Tunitzky, M. D., Philadelphia.

*Edwin R. Vander Slice, M. D., Philadelphia.

Consulting Surgeon, George B. Kunkel, M. D., Harrisburg, Dauphin County.
 Consulting Laryngologist, Charles Rebeck, M. D., Harrisburg, Dauphin County.
 Bacteriologist, Elmer E. McKee, M. D., Philadelphia.
 Druggist, Robert E. Hemminger, Carlisle, Cumberland County.
 Superintendent of Grounds and Buildings, John H. Patterson, Philadelphia
 Clerk, L. Walter Garrett, West Chester, Chester County.

Stenographers—Miss Mabel C. Johnson, Harrisburg, Dauphin County.

Miss Jane B. Kenyon, Carlisle, Cumberland County.

*Miss Nelle M. Kissinger, Carlisle, Cumberland County.

Sanatoria Statistician, Miss Anna L. Hart, South Bethlehem, Northampton County.

Steward, Louis Sorg, Chambersburg, Franklin County.

Storekeeper, Harry Kunkel, Glen Rock, York County.

Matrons—Mrs. Annie M. Klee, Chambersburg, Franklin County.

Mrs. Annie E. Yeager, Chambersburg, Franklin County.

General Foreman, J. T. Staley, Fayetteville, R. D., Franklin County.

Mechanic, Arthur Yeager, Chambersburg, Franklin County.

Head Nurse, Miss M. Agnes Lowell, Lancaster, Lancaster County.

Head Nurse at Hospital, Miss Mary A. Weir, Wilkes-Barre, Luzerne County.

Head Nurse at Children's Hospital:

*Mrs. Laura B. Cleaver, Elysburg, Northumberland County.

Miss Catherine I. Cobb, Scranton, Lackawanna County.

Nurses

Augusta Buhl	Margaret Heslin.
Grace Bailey.	Caroline Hall.
Frances Black.	Mary S. Holden.
Hilda Boyle.	Ellen J. Hughes.
Sarah V. Burkert.	Helen Kenney.
Eleanor C. Brooks.	*Viola Kennedy.
*Margaret M. Bell.	Catherine Kann.
Dorothy Carter.	Edna Keefer.
*Olia M. Cooper.	*Alma Lutz.
Anne D. Cockerille.	Vinetta D. Larson.
Catherine Cadden.	Florence E. Laskowski.
Anna Cummings.	Nellie Lynch.
*Maude B. Clark.	*Eleanor F. Lehman.
*Mary E. Cliver.	Elizabeth A. Lorrh.
Anna L. Dowling.	Ella McKeon.
*Margaret I. Doolan.	*C. McNerney.
*Anna M. Dunleavy.	*Anna M. Morgan.
Catherine B. Fitzgerald.	Florence Magdeburg.
Helen Gibb.	*Helen Maguire.
Ruth M. Greer.	*Anine Monck.
*Margaret Haskell.	Agnes D. Marcus.
Braide Hughes.	*Lillie Maxwell.
*Ruth Hicks.	*Anna E. O'Neill.

*A. M. O'Dwyer.
 *Mollie O'Moran.
 *Louise Patterson.
 *Mary C. Pass.
 Elizabeth Price.
 Edith Peightal.
 *Jennie Phillips.
 *Elizabeth Rupert.
 *Susan Stewart.
 Ethel Starrett.
 Esta Stewart.
 *Edith B. Smith.
 *Mary G. Silk.

Ella Singles.
 *Blanche Soffingere.
 Mary Verdier.
 Ada Walhay.
 Lydie Williams.
 Margaret M. Ward.
 Phyllis Williams.
 Mary Wilson.
 *Kathleen A. Wilson.
 *Mary E. Walker.
 Etta E. Xander.
 *Elizabeth Zimmer.
 *Elizabeth Zortman.

Laundry Help.

*Charles Becker.
 Sarah Bratton.
 F. C. Buck.
 *Edna Carbaugh.
 *Catherine Clark.
 *Marj Chase.
 *Sophia Cresnie.
 *Anna Chilcot.
 *Elizabeth Fralich.
 *Fannie E. Grover.
 *Elizabeth Gill.
 Mara Garbaczeska.
 Anna Hutton.
 *Thomas Iveson.

*Sophie Kresnie.
 *Pauline Krasnoslika.
 *Mabel Mathewson.
 *Sista Mitnet.
 Ena Panasszyuk.
 *Albert Powderhill.
 S. H. Rhoads.
 Kyjda Stryczka.
 Lillian Stout.
 James Staley.
 *Nellie M. Singles.
 Anna Teliczuk.
 *John C. Wurflein.

Waitresses.

Ella Adams.
 *Ruth Baker.
 Jane Baker.
 Ida Barnes.
 Pearl Benschoff.
 *Lillian Baker.
 *Mary Beck.
 *Florence Berg.
 *Anna Baker.
 Elizabeth Bolton.
 Margaret Bolton.
 *Bella Baker.
 Margaret Burkert.
 Kathryn Bowman.
 *Muriel Dincan.
 *Grace Dunn.
 *Esther Dillon.
 *Isabel Dunbar.
 *Sarah Dunbar.
 *Estella Doll.
 *Helen DeGour.
 *Irene Dunkelberger.
 *Myrtle Eslinger.
 *Ida Eslinger.

Evelyn Ewing.
 Mary Ewing.
 *Catharine Etnoyer.
 *Jennie Eveland.
 Margaret Fisber.
 *Lottie Funk.
 Jessie Fetrow.
 *Emily Fraim.
 Gertrude Farridy.
 *Catherine Greiner.
 *Helen Gehring.
 *Alda E. Grubb.
 *Lauccetta Gregory.
 Esther Hobday.
 Margaret Hacker.
 Bertha Hall.
 *Nellie Hall.
 *Mary Hurd.
 Lillian Humphreys.
 Harriet Harris.
 Mary A. House.
 *Tillie Heishley.
 Mary Hall.
 Mary Hill.

Ethel Hill.	Muriel Pittenger.
*Mattie Howard.	Anna M. Palmer.
*Lydia H. Jones.	*Alsina Quickley.
*Bernadene Jacoby.	*Rose Rodgers
Bertha Kauffman.	*Florence Robinson.
*Hermenia Katosick.	*Frances Ryan.
*Rose Katosick.	*Anna Robinson.
*Margaret Keller.	Bessie Rosenberry.
*Daisy Kyle.	*Mirian Sundy.
Lulu Lowrey.	*Bertha Simms.
*Ora Leonard.	*Louise Smith.
Viola Lowrey.	Virgie Steinberger.
Florence Lehman.	Grace Steinberger.
Irene Luckenbaugh.	*M. E. Shatzer.
Catherine Martin.	*Ellen Smith.
Mary Misaras.	*Margaret Spurrier.
Tillie Maurer.	*Ella Strouse.
*Mary Mathner.	*Mildred Seilhamer.
*Ada May	Mabel Seilhamer.
*Mary Motter	*Emma Seilhamer.
Daisy Miller.	*Florence Shanafeltzer.
Fleda Martin.	Mildred Sharf.
Marian Matchnen.	*Nettie Snyder.
Nellie McCann.	Louise Toland.
*Mary McMackin.	*Anna E. Urich.
*Mabel McNamee.	*Margaret Weibley.
*Josephine McDermitt.	Hilma Weekley.
*Agnes Nitchman.	Laura Weekley.
Irene Nye.	*Evelyn Warren.
Minerva Nye.	Beryl Warren.
Adeana Ottenberger.	*Bertha Weibley.
*Bridget O'Gara.	*Edith Wells.
*Lillian Oberdick.	Helen Wingert.
Ruth G. Phillips.	*Rebecca Weills.
Mae Palmer.	*Pansy Yeager.

Orderlies.

*Dorsato Alteri.	Ludwick Kozmierick.
*Joseph Altieri.	John Koch.
*Victor Adams.	Patrick Kelley.
*Dominick Antonelli.	*John Duffy.
John Brett.	*Nathan Empole.
*Joseph Burns.	Leroy Foley.
*Harry Chase.	*James French.
*John Carr.	Norman Franklin.
William Campbell.	*James Flannigan.
James Cincinnati.	*Benjamin Feldman.
Michael Doheney.	*John Gentile.
William R. Dransfield.	Edward Gillespie.
W. J. Duffy.	*Andrew Hertcorn.
Alexander Devenney.	*John C. Haggerty.
George Reithers.	Hugh Johnson.
William DeKraft.	*Edward Kelley.

Charles Mayhue.
 *George Manspeaker.
 Charles Moore.
 *Stanley J. McCunney.
 John Koprowske.
 *Charles Mellen.
 Joseph Mulligan.
 *William Margolf.
 Joseph McDonald.
 Edward McKeon.
 Carl Ness.
 *Grover Noon.
 William O'Donnell.
 Gez Palchak.
 Antonio Perniche.
 *William Riblett.
 Joseph Ripley.

*Milton Ruth.
 *Harold Hemington.
 *George Reid.
 *Frank Schmidgall.
 Joseph Sanatowicz.
 *Joseph Senko.
 James Squillace.
 *William Settles.
 John Schultz.
 *Thomas Smith.
 *Adam Toloczko.
 *Leon VanLacken.
 *William Westwater.
 Harry Weiss.
 *James Walls.
 *Edward Weekley.

Wardmaids.

*Dessie Brunton.
 Margaret Barbour.
 *Harriet Bryant.
 *Helen Boland.
 Aline Baroni.
 Sarah Bramer.
 *Bridget Connors.
 Tillie Cook.
 Mabel Clifford.
 *Mary Conway.
 Lethia Cantlin.
 *Mollie Chester.
 *Florence Defibaugh.
 Edith Davis.
 *Mary Dwyer.
 Mary Dank.
 Mary Davies.
 Mary Doheney.
 Edna Duffy.
 *Carrie Esrey.
 Gertrude Eberenze.
 Elizabeth Eyster.
 Pearl Fox.
 Edith Friel.
 Rose Fields.
 *Mary Ferguson.
 *Bertha Fowler.
 *Marie Frabfelder.
 *Florence Haberstroh.
 Annie Hardick.
 *Anna Hawk.
 *Marian Haberstroh.
 *Minnie Hafner.
 *Anna Hoffman.

*Ida Huber.
 Anna Hirs.
 *Marie Johnson.
 Helena Johnson.
 *Catherine Kelly.
 *Letitia Kennedy.
 Mary Kirwin.
 Grace A. Lane.
 *Johanna Ligtermolt.
 *Celia Morton.
 *Lillian McKnight.
 Agnes McGee.
 *Clara May.
 *Rose Marks.
 *Frances McDevitt.
 *Catherine McMullen.
 Anna Papp.
 Anna Pone.
 *Anna Rachael.
 Margaret Rogan.
 *Esther Sedman.
 Lucy Strawsbaugh.
 *Bertha Sickles.
 Martha Sewell.
 *Sylvia Tome.
 *Evelyn Turner.
 *Ada Taylor.
 Clara Wooley.
 Tina Weaver.
 Helen Worrell.
 *Agnes Weston.
 Anna Wampler.
 *Mary Zell.

Scrubwomen.

Mary Bas.	Mina Krasnoslika.
Pawlina Borsuk.	Emiliae Lewickoi
*Anna Czoski.	Szdia Mitruc.
*Katie Dudai.	Sophie Nedelco.
Ena Dzioba.	Anna Nestelco.
*Anna Gazda.	Mary Olejnik.
Zorka George.	Ena Ostap.
Kyjda Gtsunka.	Antonina Ostap
*Annie Gtsunka.	Eszti Papp.
Lydia Gummo.	*Agnys Szkodo.
*Mary Hnatuik.	Ena Szymkir.
Mary Krastoseu.	Mary Skoczias.
*Pauline Krasnoslika.	Alexandria Wasnisa.
*Telka Krasnoslika.	

Kitchen Helpers.

*Margaret Feldman.	*Mary Wosnisa.
Margaret Touer.	*Eliza Moore.
Mamie Downes.	*Mary Misaras.
*Mary Firth.	Mary C. Matchner
Mary Hnatuik.	*Antonina Ostop.
*Mattie Howard.	John Olejnik.
*Mary Krostascu.	Ena Pytlowana.
Dick Hnatuik.	*Mike Wieczorek.
anna Unterberger.	*John Gtusnka.

Seamstresses.

Julia Boyle.	Florence Liggett.
Josie Garber.	

Chambermaids.

Sadie Funk.	Anna Sulsbaugh.
Mary Haverstick.	Mary Stambaugh.
*Mary Maley.	*Agnes Sullivan.

Telephone Operators.

*Louise Graul.	*Catherine McCaffery.
Daisy Maher.	Fannie Tomlinson.
Johanna Maher.	

Poultrymen.

Michael Joseph Brennan.	*Felix G. Strickel.
George Fitzgerald.	Levi Wagaman.
*Aldo Morone.	

Cooks.

Ignotz Hairkus, Chef.	*Benne Saretsky.
*Rudolph Hartung, Chef.	Annie Grady.
*Rudolph Hartman, Chef.	Mrs. Elsie Wolfgang.
*W. M. Madden, Chef.	Fred Hanson.
*Albert Plant, Chef.	Mrs. Alda Rodgers.
Pit Syrbo, Chef.	*Joseph Stolareczuk.
Sztif Pryczka, Ass't. Chef.	Gus Gramozi.
Alice Butterfield.	*B. I. Gensen.
*Mrs. Elsie Dey.	*Mike Wieczorek.
*May Dunn.	

Bakers.

E. Schiller.
Maurice Crosby.

*D. Mezykowski.

Vegetable Peelers.

Laura Folk.
Ailie Franklin.
*Sadie Galisz.
Kyjda Halkiwicz.
Witka Kosowska.

*Mary Lynch.
*Euliana Nadlacian.
Mary Pytlawanna.
Telka Wuzwyn.

Dishwashers.

*Thomas O'Neill.
*Walter Gtusnka.
*Joseph Null.
*Clarence Kauffman.
George John.

John Brett.
Harry Stac.
Joseph Symkir.
John Skoczylas.

Watchmen.

Thomas Collins.
John Duffy.
*J. B. May.
*William Muthard.
James Whalen.

John Whitney.
John Wilson.
Michael Boyle.
Harry Hoffman.

Cellarmen.

Nic Nedelco.
*Arthur Wallace.
*Calvin Wallace.

*David Butler.
Archie Wagaman.
Oscar A. Carbaugh.

Miscellaneous.

George Loucks.
*Edgar Dey.
*Arthur McDonald.
Henry Richards.
*Roland Waldbeiser.
*Clarence Lobar.
*Joseph Connell.
Gus Flsesser.
J. J. Purcell.
Frank Crowe.
*William Gehring.
*Harry Nicholson.
*Richard Owens.
Harry Renington.
Clark Michael.
James Cantlin.
*John Monaghan.
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William Naugle.
*Harry Nicholson.
Grover Naugle.
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C. M. Rupert.
Theodore Schuck.
George Sebruary.
*Archie Smith.
Arthur Verdier.
William Wagaman.
David Wagaman.
*Enoch Wagaman.
Daniel McCarthy.
John O'Shea.
*Garabed H. Kassabian.
Penrose Smith.
*Frank Dech

*Resigned.

PENNSYLVANIA STATE SANATORIUM FOR TUBERCULOSIS NO. 2,
CRESSON.

*Medical Director, William G. Turnbull, M. D.,
Philadelphia.*

Deputy Medical Director, *S. H. Rinhardt, M. D., Washington, Washington
County.

Assistant Physicians.

D. S. Brachman, M. D., Philadelphia.

M. E. Cowen, M. D., Greens Farms, Conn.

*J. W. E. Ellenberger, M. D., Tyrone, Blair County.

*S. Gross, M. D., Philadelphia.

Charles S. Gracey, M. D., Everett, Bedford County.

§R. V. Zabarkes, M. D., Philadelphia.

Consulting Surgeon, Joseph D. Findley, M. D., Altoona, Blair County.

Visiting Laryngologist, S. P. Glover, M. D., Altoona, Blair County.

Storekeeper, George C. Metzgar, Philadelphia.

Master Mechanic and General Foreman, W. L. Fry, Ridgway, Elk County.

Assistant Master Mechanic, Joseph Bolger.

Stenographers—Miss Cecelia Conrad, Loretto, Cambria County.

Miss Mary E. Ervin, Waynesboro, Franklin County.

Matron and Stewardess, Miss Rose P. Campbell, Philadelphia.

Assistant Matron—*Miss Nellie M. Murphy, Philadelphia.

Miss Mary Cheslock, Gallitzin, Cambria County.

Nurses.

Head Nurse, Miss E. C. Allison, Philadelphia.

*Kathryn Brede.

Mary A. Kelly.

*Annette Cope.

Ronie M. Kerstetter.

*Mary Eckhardt.

*Christian Laurence.

*Margaret A. Elliott.

Maude Leffler.

May Agnes Earley

*Margaret Long.

Elizabeth Fowler.

Elizabeth R. Moore.

*Josephine F. Farbaugh.

Lillian B. Noone.

Marian K. Ford.

Mary G. O'Donnell.

*Olive D. Hartlove.

Louise E. K. Rose.

*Katherine Hauser.

*Caroline E. Shay.

*M. E. Hausselman.

Nellie M. Tidd.

Gertrude E. Wise.

Laundry Help.

Rose Adams, Manager.

*Rose Killinger.

*Earl P. Gladding, Manager.

*Mary Killinger.

*Vincent Billetdoux.

Meri Kochan.

Charles Adams.

*Zuzi Snoes.

*Maude Adams.

*Mary Snielnyok.

*Verne Antolich.

*Margaret Smith.

Emma Banks.

*Anna Anderson.

*Ella Killinger.

*Rose Babod.

*Pauline Comstock.
 Mary M. Cheslock.
 Eva Durna.
 Annie Szielsko.
 *Viola Horan.
 Kiejdy Himel.
 Meri Hovanjcis.

*Minnie Koellner.
 *Eliza Koellner.
 *Lucija Kamara.
 *Marian Reed.
 *Martha Stewart.
 *Maryanna Siersga.

Waitresses.

*Milka Boici.
 *Eva Clapsadle.
 *Mary Chucks.
 *Rose Conway.
 Helen Decoskey.
 Margaret I. Douglass.
 Constance Donohue.
 *Grace Dunn.
 *Evelyne Haupt.
 Meri Hroca.
 *Florence Horan.
 *Anini Hockiska.
 *Mattie Sukosky.
 Mary Gnap.
 Julia Misnik.
 Lela Mountz.
 Agnes Sutton.
 Iva Sutton.
 Julia Thomas.

Mary Wozna.
 Mary Kriston.
 Annie Plumber.
 Mary Stephens.
 Mary Vangreen.
 Annie Wulaszck.
 Jennie Bertram.
 *Alverta Luckenbaugh.
 *Kathryn Livingston.
 Annie Lafferty.
 *Laura Moorehead.
 Vera Moorehead.
 Hazel Moorehead.
 *Theresa O'Brien.
 Mary Pietzsch.
 Alice Stefanowicz.
 Cecelia Sherick.
 *Annie White.

Waiter.

*Thomas Brown.

Orderlies.

*Julius Bast.
 *Oscar Bender.
 *William Breth.
 Charles Banks.
 Herman Bloch.
 Castner Bowers.
 James Corry.
 Ralph Dull.
 *David Evans.
 Charles Fike.
 Joseph Fera.
 George Fulmer.
 *James Glenn.
 *John Gessler.
 Frank Hawk.
 Robert Hoehl.
 *Roy Kelly.
 *John Kildun.
 *Earl Kline.
 *Anthony Karlik.
 *Roy Leasure.

*R. W. Lindsay.
 *Kenneth E. Long.
 Andrew Layshock.
 *Harry Lukehart.
 Paul Melissa.
 *Pat McDonough.
 *Elmer Moorehead.
 *Carl Mottey.
 *Frank O'Rourke.
 *Moses Ostheimer.
 Lawrence O'Tool.
 James Parker.
 Max Polonsky.
 Clarence Stuck.
 *John Smith.
 *Emil Teichert.
 *Charles Tyson.
 Edward Walters.
 *John Watson.
 *Robert Young.

Wardmaids.

*Mary Boboige.	Marie Nicolis.
*Mamie Brown.	*Gertrude Ostein.
Fern Belles.	*Marcia Patterson.
May Chapman.	Emma Rainey.
*Lulu Deihl.	*Anna Rock.
*Della Dearrange.	*Matilda Steuer.
*Stella Dobbins.	*Ruth Schaffer.
Florence Dawson.	*Helen Sistek.
*Katie Fox.	Emma Seigrist.
*Ellen Herron.	Emma Steele.
*Clara Hobough.	Rebecca Till.
*Minnie Hawley.	Helen Walsh.
Iva Hinton.	Edna Ward.
Clara Kirkpatrick.	*Hattie Young.
*Anna Mainey.	

Nurses' Assistants.

Hulda Aggas.	*Bess Summerville.
Sarah Keyes.	*Ethel M. Thompson.
Loas Porter.	

Scrubwomen.

Arbita Baltruska.	Annie Mesarch.
Aniela Borowa.	Anna Miller.
*Aniela Bashleda.	Mary Nighborowie.
Suzi Dzamba.	*Aniela Ohrolak.
Pauline Fuller.	Mary Obula.
Annie Guzak.	*Victoria Rakowska.
*Patoscia Huver.	Mary Sinkowski.
*Mary Krall.	Veronika Sihelnik.
*Mary Krinston.	*Anna Soundaz.
*Deri Ledia.	Mary Thomas.

Kitchen Helpers.

William Burke.	*Alex Mackawicz.
Ellie Crynock.	*Michele Panachella.
*John Conrad.	Anna Prantil.
Johu Gubale.	*Marie Prantil.
*Julian Gogot.	*Annie Rashick.
Joseph Ihnat.	Michael Sweeney.
Stanley Koss.	John Sweeney.
*George Kowaskzyk.	*Charles Skupin.
Frank Mogo.	Maryanna Sierzega.
*John Mogo.	*Joe Skupin.
*John Janusz.	*Joe Ulmanek.

Seamstresses.

Alice Hastings.	*Helen Vencell.
*Emily Beckler.	*Clara Ziebold.
Ella McKean.	

Chambersmaids.

Kato Budaes.	Ethel Lenhart.
*Agnes Burdyn.	Lorena Thompson.

Telephone Operators.

*Hazel Adams.
Helen Clegg.

Nellie Flynn.
Alma Oyler.

Poultrymen.

*Thomas Howard.

Charles Tyson.

Cooks.

Charles H. Thompson, Chef.
Anna Brasington.
*Charlotte Brown.
*May Dunn.
*Bulah Eger.
*Virginia Haupt.

*Hilbert Hovey.
*Mabel Johnson.
*Mae McDowell.
*Cora Neff.
Mae Ramsey.
D. C. Burke, Butcher.

Miscellaneous.

*John C. Thomas.
William Conklin.
Nels Johnson.
*Lawrence O'Tool.
*Floyd Farren.
Martin Johnson.
*M. B. Miller.
*M. P. Murray.
*Lewis Schatzinger.
*William F. Sheppard.
S. Stevens.
Bernard Etter.
I othar Heym.
*Dick Condron.
Neil McCool.
C. J. Delozier.
*Joseph Bolger.
M. T. McDonough.
*Frank O'Freil.
*Harry Thompson.
Thomas Bradley.
Edward P. Shannon.
James Drury.

J. A. Benden.
Oscar M. Hertzog.
A. J. McCarty.
W. B. Tubbs.
Lottie Martin.
*Vincent Billetdeox.
*Daniel Carney.
*Tony Chessock.
*John Ivone.
S. Stevens.
*F. M. Reed.
*John Mack.
*Arthur Mulhern.
John M. Bryson.
*Edward Eger.
Richard Eger.
Thomas Eger.
C. J. Freidhof.
*Mike Gecinski.
J. A. Nagle.
*Paul Spatz.
H. E. Steak.
*B. H. Reihard.

Blacksmiths.

*William H. Fox.
*Joseph Gutierrez.

*Michael Moyer.

*Resigned.

§Transferred.

PENNSYLVANIA STATE SANATORIUM FOR TUBERCULOSIS
NO. 3, HAMBURG.

*Medical Director, Thomas H. A. Stites, M. D.,
Nazareth, Northampton County.*

Deputy Medical Director, B. A. McDermott, M. D., Philadelphia.

Assistant Physicians.

P. E. Schwarz, M. D., Easton, Northampton County.

Abraham Epstein, M. D., Philadelphia.

Ray D. Saul, M. D., Harrisburg, Dauphin County.

Ray Vera Zabarkes, M. D., Philadelphia.

Consulting Surgeon, *J. Harry Swaving, M. D., Pottsville, Schuylkill County.

Consulting Laryngologist, Charles S. Rebeck, M. D., Harrisburg, Dauphin County.

Stenographers—Miss Nellie M. Kissinger, Carlisle, Cumberland County.

Miss Viola MacGowan, Bryn Mawr, Montgomery County.

Matron, Mrs. Mary A. Mentz, Williamsport, Lycoming County.

Master Mechanic, Walter E. Wanner, Ridgway, Elk County.

Assistant Master Mechanic, W. H. Addams, Harrisburg, Dauphin County.

Head Nurse, Miss Ella E. Read, Philadelphia.

Staff Nurses.

Emily M. Ellis.

Mary S. Eckhardt.

Mary E. Dougherty.

Alice N. Cochran.

Selina Wilder.

Elizabeth Ruppert.

Adele Macquillen.

Christian Lawrence.

Ida S. Longacre.

Cornelia H. Parker.

Julienne Schlegel.

Frances Hinton.

Viola Kennedy.

Bertha R. Henry.

Sara Sailer.

Mary Alice Roberts.

Elizabeth Ramsden.

Gertrude S. Lee.

Mary McMoneagle.

Ethel G. Brown.

Nurses' Helpers.

Clara Ziebold.

Marcia Patterson.

Chambermaids.

Victoria Venavage.

Agnes Lipsky.

Mary Shuckes.

Wardmaids.

Kathryn Lee.

Carrie Esrey.

Rose Osborne.

Jennie M. Kline.

Letitia Kennedy.

Orderlies.

R. W. Lindsay.

Quintus A. Sourwine.

John J. Casey.

Adam Toloczko.

John Smith.

Alvin Koppenhaven.

William J. Margolf.

James W. Cotter.

George V. Penzes.

Frank Coglitore.

Walter Schultz.
Warren Towsen.
James R. Carson.

Thomas O'Neil.
Leon Metzger.

Kitchen.

Neil Shannon, Chef
Elsie McCloskey.
Mary L. Sculley.
Samuel Dunkle.
Mary Souders.
Margaret Poland.
Ella Bruzas.

Pasquale Tabani.
Thomas Emanuel.
Domenico Crezincio.
John J. White.
Peter Agozzino.
Samuel Gentile.
George Santi.

Bakery.

Gottlieb Ruggaber.

Pietro Diluvio.

Laundry.

Joseph A. Anders.
George W. Mullins.
Kathryn Livingston.
Lizzie Fesig.
Louisa Albert.

Mae Brown.
Mrs. Albert Kimnich.
Amanda Arnold.
Lucy Thompson.

Waitresses.

Jennie Sellers.
Mary Brynersky.
Helen Malinowsky.
Mary Frank.
Minnie Koellner.
Frances Ryan.
Helen Yancofsky.
Susie Pincavage.
Bertha Strenkofsky.
Clara Mogel.
Helen Leiby.
Mary Bruzas.
Lillian Wink.
Anna Starr.

Helen Chubby.
Stella Faleski.*
Carrie Zelinskie.
Mary Paleskie.
Lillian Oberdick.
Helen Wells.
Viola Crissman.
Ellie Korsak.
Ellie Zagrocky.
Rebecca Radel.
Sallie Rentschler.
Edith Wells.
Ella Pincavage.

Cleaners.

Anna Lutsky.
Mary S. Fesig.
Mary Ryan.
Annie Bernatonis.
Mary Fisher.
Adella Yakonis.

Mary Ziankucky.
Margaret Samanis.
Tillie Heishley.
Mary Wychulis.
Pauline Knomoseliki.
Tuckley Millashuskey.

Storekeepers.

John S. Meharg.

Albert J. Dunkle.

Carpenter.

Charles Epler.

	Chauffeurs.
Homer J. Hagy.	Robert Gehringer.
	Coal Passers.
Wellington Heim.	Clarence Romberger.
	At Disposal Plant.
Frank V. Fichthorn.	Michael Ginty.
	Electrician.
H. H. Myers.	
	Engineers.
S. P. Scip.	A. Henry Shollenberger
J. W. Allamong.	
	Firemen.
W. H. Confer.	D. S. Wagner.
Milton J. Wolfinger.	
	Plumber.
Joseph Sheridan.	
	Pump Runners.
Thomas Dobson.	Charles McCloud
	Scamstresses.
Sallie Forman.	Mary Rafferty.
	Telephone Operators.
Marian Henne.	Ruth Burkett.
Irwin J. Noil.	
	On Truck.
George Bailey.	
	Watchmen.
Harry Powderhill.	John Freeman.

*Deceased.

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Miss Mabel E. Thorn, Gettysburg, Adams County.

Stenographers—Miss Edna M. Knisely, Eberly's Mill, Cumberland County.

Miss Manon Lingle, Penbrook, Dauphin County.

Clerk, Mrs. Bella Weible, Tidioute, Warren County.

*Resigned.

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L. W. Ritzl,	McKees Rocks,	Allegheny.
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*Fred H. Mayo,	Beaver,	Beaver.
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*C. S. Taylor,	Altoona,	Blair.
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Jerry W. Leedom,	Duncansville,	Blair.
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R. A. Lambert,	Roaring Spring,	Blair.
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*W. H. McLanahan,	Tyrone,	Blair.
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*E. P. Kester,	Towanda,	Bradford.
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Allis Pharmacy,	Wyalusing,	Bradford.
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Dr. H. W. Johnson,	Riegelsville,	Bucks.
O. L. Metzler,	Sellersville,	Bucks.
H. L. Bassett,	Yardley,	Bucks.
John Cheeseman,	Branchton,	Butler.
A. J. Edmonds,	Bruin,	Butler.
*Redick & Grohman,	Butler,	Butler.
J. D. Thomas,	Byans City,	Butler.
Earle Bell,	Mars,	Butler.
Dr. E. B. Mershon,	Saxsonburg,	Butler.
W. J. Maybury,	Slippery Rock,	Butler.
H. C. Hindman,	West Sunbury,	Butler.
C. E. Reed,	Zellenople,	Butler.
Dr. G. W. Krumbine,	Ashville,	Cambria.
H. A. Morris,	Barnesboro,	Cambria.
J. R. George,	Beaverdale,	Cambria.
L. B. Bland,	Blandburg,	Cambria.
Cyrus W. Davis,	Conemaugh,	Cambria.
E. L. Study,	Cresson,	Cambria.
Dr. W. G. Turnbull,	Cresson (Sanatorium),	Cambria.
Dr. W. O. Keffler,	Dean, R. D.,	Cambria.
*E. James & Son,	Ebensburg,	Cambria.
K. A. Reed,	Gallitzin,	Cambria.
James Commons & Sons,	Hastings,	Cambria.
Kabler Drug Company,	Johnstown,	Cambria.
*Jacob Ringold,	Johnstown,	Cambria.
Edward Franke,	Johnstown (Dale),	Cambria.
G. I. Yearlick,	Lilly,	Cambria.
W. A. B. Little,	Loretto,	Cambria.
John A. Gunn,	Patton,	Cambria.
R. L. Honck,	Portage,	Cambria.
Scalp Drug Company,	Scalp Level,	Cambria.
South Fork Pharmacy,	South Fork,	Cambria.
Brookbank Mercantile Company,	Driftwood,	Cameron.
*Emporium Drug Company,	Emporium,	Cameron.
Counsil Brothers,	Sinnemaehoning,	Cameron.
Estate of A. S. Van Winkle,	Beaver Meadow,	Carbon.
Howard Albert,	Lansford,	Carbon.
Charles H. Wagner,	Lehighton,	Carbon.
J. W. Zelt,	East Manch Chunk,	Carbon.
*Manch Chunk Pharmacy,	Manch Chunk,	Carbon.
Charles J. Bechtel,	Nesquehoning,	Carbon.
J. H. Brown,	Palmerton,	Carbon.
Thomas E. Davis,	Summit Hill,	Carbon.
W. P. Long,	Weatherly,	Carbon.

Distributors of Diphtheria Antitoxin—Cont'd.

Distributors.	Place.	County.
*Green's Pharmacy Company,	Bellefonte,	Centre.
B. M. Boon & Company,	Center Hall,	Centre.
H. A. Moore,	Howard,	Centre.
Thomas F. Meyer,	Millheim,	Centre.
W. M. Melick,	Phillipsburg,	Centre.
William A. Sickel,	Snow Shoe,	Centre.
Ray D. Gilliland,	State College,	Centre.
Thomas C. Marshall,	Avondale,	Chester.
Dr. James Aiken,	Berwyn,	Chester.
W. S. Young,	Coatesville,	Chester.
D. W. Hutchison,	East Downingtown,	Chester.
Dr. L. S. Corson,	Glen Moore,	Chester.
A. W. Le Van,	Honey Brook,	Chester.
George R. Walton,	Malvern,	Chester.
C. B. McCullough,	Oxford,	Chester.
Thompson Hudson,	Oxford, R. D.,	Chester.
Walter E. Ruche,	Parkesburg,	Chester.
H. H. Dancy,	Phoenixville,	Chester.
W. C. Taylor,	Spring City,	Chester.
*Jesse P. Thatcher,	West Chester,	Chester.
Frank P. Houston,	West Grove,	Chester.
*Reid's Drug Store,	Clarion,	Clarion.
S. S. Gathers,	Curlsville,	Clarion.
Dr. R. J. Greer,	East Brady,	Clarion.
Hawthorn Drug Company,	Hawthorn,	Clarion.
W. H. Whiting,	Knox,	Clarion.
G. W. Kuhns,	Leeper,	Clarion.
W. W. Corbett,	New Bethlehem,	Clarion.
J. W. Kerr,	Rimersburg,	Clarion.
J. S. Craig,	St. Petersburg,	Clarion.
Snyder's Pharmacy,	Shippenville,	Clarion.
L. R. McKee,	Sligo,	Clarion.
*F. A. Brenner,	Clearfield,	Clearfield.
W. C. McCartney,	Coalport,	Clearfield.
W. K. Wrigley,	Curwensville,	Clearfield.
G. W. S. Humphreys,	Du Bois,	Clearfield.
Glen Richey Trading Company,	Glen Richey,	Clearfield.
Dr. J. Currier,	Grampian,	Clearfield.
Phoenix Drug Store,	Houtzdale,	Clearfield.
Dr. J. S. Flegal,	Karthaus,	Clearfield.
Dr. S. J. Miller,	Madera,	Clearfield.
Alexander D. Lydic,	Mahaffey,	Clearfield.
H. C. Shugert,	Morrisdale Mines,	Clearfield.
*S. M. Irvin,	Osceola Mills,	Clearfield.
Dr. J. P. Spackman,	Peale,	Clearfield.
Tyler Mercantile Company,	Tyler,	Clearfield.
Winburne Pharmacy,	Winburne,	Clearfield.
Mrs. George H. Tibbins,	Beech Creek,	Clinton.
Dr. Graydon D. Mervine,	Bitumen,	Clinton.
Frank Waitz,	Flemington,	Clinton.
*Hilton & Heffner,	Lock Haven,	Clinton.
Valley Drug Store,	Mill Hall,	Clinton.
G. C. Slack & Company,	Renovo,	Clinton.
Pennington & Seely,	Benton,	Columbia.
Clewell & Currin,	Berwick,	Columbia.
George P. Ringler,	Bloomsburg,	Columbia.
John Waters & Company,	Catawissa,	Columbia.
John W. Goldsworthy,	Centralia,	Columbia.
H. V. Hower,	Mifflinville,	Columbia.
Charles S. Ely,	Millville,	Columbia.
*F. A. Knowlton,	Cambridge Springs,	Crawford.
J. A. Rodier & Son,	Centerville,	Crawford.
George Stratton,	Linesville,	Crawford.
*F. K. Easterwood,	Meadville,	Crawford.
Allen & Rexford,	Spartansburg,	Crawford.
Fisher & Fisher,	Springboro,	Crawford.
Wilkins & Kemble,	Titusville,	Crawford.
W. R. Shearer,	Carlisle,	Cumberland.
R. H. Holmes,	Enola,	Cumberland.
Eckels Brothers,	Mechanicsburg,	Cumberland.
Snyder's Drug Store,	Mt. Holly Springs,	Cumberland.
Good's Pharmacy,	New Cumberland,	Cumberland.
R. B. Claudy,	Newville,	Cumberland.
Fleming & Fleming,	Shippensburg,	Cumberland.
Dr. A. C. Coble,	Dauphin,	Dauphin.
S. P. Bacastow,	Derry Church,	Dauphin.
J. Lyter,	Elizabethville,	Dauphin.

Distributors of Diphtheria Antitoxin—Cont'd.

Distributors.	Place.	County.
Dr. W. E. Lebo,	Gratz,	Dauphin.
A. M. Smith & Company,	Halfax,	Dauphin.
F. J. Althouse,	Harrisburg,	Dauphin.
*E. Z. Gross,	Harrisburg,	Dauphin.
Dr. John W. Hay,	Harrisburg,	Dauphin.
J. Irwin Ruff,	Hummelstown,	Dauphin.
O. B. Leese,	Juglstown,	Dauphin.
W. G. Smith,	Lykens,	Dauphin.
C. S. Few,	Middletown,	Dauphin.
John W. Starr,	Millersburg,	Dauphin.
Estate D. A. Peters,	Steelton,	Dauphin.
John H. Kuntz,	West Hanover,	Dauphin.
Estate T. B. Davis,	Williamstown,	Dauphin.
A. L. Castle,	Chester,	Delaware.
J. H. Rea,	Chester,	Delaware.
Concordville Supply Company,	Concordville,	Delaware.
M. Joseph Dwyer,	Crum Lynne,	Delaware.
Harlan Cloud,	Darby,	Delaware.
Harry M. Davis,	Lansdowne,	Delaware.
Perry & Son,	Llanerch,	Delaware.
Ellis Pharmacy,	Media,	Delaware.
V. C. Shirer,	Swarthmore,	Delaware.
H. B. Hayes,	Upland,	Delaware.
H. C. Hadley,	Wayne,	Delaware.
Hiram Whitcomb & Son,	Dent's Run,	Elk.
(Vacancy),	Hallton,	Elk.
V. R. Smith,	Johnsonburg,	Elk.
*Ross Drug Company,	Ridgway,	Elk.
F. A. Lubr,	St. Marys,	Elk.
Shawmut Commercial Company,	Shawmut,	Elk.
Amend John,	Wilcox,	Elk.
*A. C. Newman,	Albion,	Erie.
Brick Drug Company,	Edinboro,	Erie.
N. F. Ames & Company,	Corry,	Erie.
*W. C. Andrews,	Erie,	Erie.
E. H. Tinklepaugh,	Girard,	Erie.
R. D. Anderson,	North East,	Erie.
William Gates,	Union City,	Erie.
John H. C. Keemer,	Wattsburg,	Erie.
H. H. Bulzer & Company,	Brownsville,	Fayette.
Rathmell Brothers,	Cadwallader,	Fayette.
Frank Huston,	Cornellsville,	Fayette.
Dawson Pharmacy,	Dawson,	Fayette.
W. G. Dunaway,	Fairchance,	Fayette.
Williams Pharmacy,	Fayette City,	Fayette.
F. J. Connell,	Masontown,	Fayette.
E. S. Tyler,	Point Marion,	Fayette.
G. A. Feather,	Smithfield,	Fayette.
*R. E. Springer,	Uniontown,	Fayette.
F. E. Oglevee,	Vanderbilt,	Fayette.
C. Y. Detar,	Kellettville,	Forest.
J. E. Ingersoll,	Lynch,	Forest.
A. D. Neill,	Marienville,	Forest.
Mayburg Supply Company,	Mayburg,	Forest.
*R. A. Walker,	Tionesta,	Forest.
Dr. W. G. Morrow,	West Hickory,	Forest.
J. C. Montgomery,	Chambersburg,	Franklin.
Skluner & Haller,	Chambersburg,	Franklin.
J. F. Brinley,	Dry Run,	Franklin.
Charles B. Carl,	Greencastle,	Franklin.
Harry B. Krebs,	Mercersburg,	Franklin.
Dr. Fred. C. Johnson,	Mont Alto,	Franklin.
*D. L. Miller,	Waynesboro,	Franklin.
C. J. Barton,	Hustontown,	Fulton.
*Leslie W. Seylar,	McConnellsburg,	Fulton.
N. G. Cunningham,	New Grenada,	Fulton.
J. E. Palmer,	Warfordsburg,	Fulton.
Dr. A. J. Gibbons,	Carmichaels,	Greene.
Dr. C. H. Day,	Clarksville,	Greene.
G. W. Hatfield,	Mt. Morris,	Greene.
W. O. Kline,	Rice's Landing,	Greene.
*Ullom & Bailey,	Waynesburg,	Greene.
Benmbaugh & Company,	Alto,	Huntingdon.
Harry R. Grove,	Alexandria,	Huntingdon.
P. W. Richardson,	Birmingham,	Huntingdon.
*H. E. Steel,	Huntingdon,	Huntingdon.
A. M. Parker,	Mapleton Depot,	Huntingdon.

Distributors of Diphtheria Antitoxin—Cont'd.

Distributors.	Place.	County.
J. M. Minnick,	Mount Union,	Huntingdon.
E. O. Heck,	Orbisona,	Huntingdon.
Miners & Farmers Supply Company,	Robertsdale,	Huntingdon.
F. K. Mattern,	Marrior's Mark,	Huntingdon.
A. L. Freed,	Arcadia,	Indiana.
H. M. Elliott,	Armagh,	Indiana.
Dr. John M. Wilson,	Blairsville,	Indiana.
H. T. Ross,	Brush Valley,	Indiana.
J. W. Evans,	Clymer,	Indiana.
H. L. McCullough,	Cookport,	Indiana.
F. A. Rice,	Dixonville,	Indiana.
John B. Conner,	Glen Campbell,	Indiana.
J. A. Fleming,	Homer City,	Indiana.
*Elmer W. Allison,	Indiana,	Indiana.
Will C. Griffith,	Marion Center,	Indiana.
T. D. Stephens,	Penn Run,	Indiana.
E. Green,	Plumville,	Indiana.
H. W. Oberlin,	Rochester Mills,	Indiana.
J. A. Pearce,	Rossiter,	Indiana.
Elmer E. Goodlin,	Saltsburg,	Indiana.
W. W. Harbison,	Shelocta,	Indiana.
Adam Black,	Smicksburg,	Indiana.
T. S. Neal,	Trade City,	Indiana.
A. J. Malburg,	Anita,	Jefferson.
Schwab's Pharmacy,	Big Run,	Jefferson.
G. H. Humphreys,	Brockwayville,	Jefferson.
*Henderson & Craig,	Brookville,	Jefferson.
Abbott & Blakeslee,	Coal Glen,	Jefferson.
M. J. Kunselman,	Coolspring,	Jefferson.
Mahoning Supply Company,	Eleanor,	Jefferson.
Cook Brothers,	Hamilton,	Jefferson.
Smail & Bruner,	Knoxdale,	Jefferson.
Burkett's Drug Store,	Punxsutawney,	Jefferson.
Dr. S. S. Hamilton,	Punxsutawney,	Jefferson.
H. Alexander Stoke,	Reynoldsville,	Jefferson.
People's Supply Company,	Summersville,	Jefferson.
Tyler Mercantile Company,	Sykesville,	Jefferson.
J. B. McMeen,	East Waterford,	Juniaata.
W. H. Banks & Company,	Mifflin,	Juniaata.
*M. P. Crawford,	Mifflintown,	Juniaata.
Heckerman's Drug Store,	Port Royal,	Juniaata.
W. H. Haines,	Thompsonstown,	Juniaata.
M. A. Poote,	Archbald,	Lackawanna.
F. E. Gramer,	Carbondale,	Lackawanna.
T. A. Purdon,	Dalton,	Lackawanna.
T. A. Shannon,	Dickson City,	Lackawanna.
J. G. Bone & Son,	Dunmore,	Lackawanna.
J. M. & F. M. Graves,	Jermyn,	Lackawanna.
Thomas O'Connor,	Jessup,	Lackawanna.
John J. Mullen,	Minooka,	Lackawanna.
W. R. Manners,	Moosic,	Lackawanna.
Dr. J. W. Knedler,	Moscow,	Lackawanna.
F. R. Coyne,	Old Forge,	Lackawanna.
T. F. O'Connor,	Olyphant,	Lackawanna.
W. S. Bloes,	Peckville,	Lackawanna.
*Chittenden Pharmacy,	Scranton,	Lackawanna.
Howard E. Griffin,	Scranton,	Lackawanna.
H. S. Jenkins,	Scranton,	Lackawanna.
Carl Koempel,	Scranton,	Lackawanna.
Peter F. Lalley,	Scranton,	Lackawanna.
Joseph Davis,	Taylor,	Lackawanna.
Dr. E. J. Murray,	Throop,	Lackawanna.
C. S. Frey,	Christiana,	Lancaster.
W. L. Bucher,	Columbia,	Lancaster.
Charles B. Dierolf,	Elizabethtown,	Lancaster.
G. S. Royer,	Ephrata,	Lancaster.
*J. A. Miller,	Lancaster,	Lancaster.
L. N. Moyer,	Lititz,	Lancaster.
H. F. Rubb,	Menheln,	Lancaster.
Ibbart Drug Company,	Marietta,	Lancaster.
E. E. Lenhardt,	M'Ilersville,	Lancaster.
Elmer W. Garber,	Mount Joy,	Lancaster.
Quarryville Drug Company,	Quarryville,	Lancaster.
Dr. J. G. Weaver,	Strasburg,	Lancaster.
Arthur Cohen,	Ellwood City,	Lawrence.
H. McGoun,	New Bedford,	Lawrence.
*McKinley & Frantz,	New Castle,	Lawrence.
T. H. Jewell,	New Wilmington,	Lawrence.
Frank B. Moorhead,	Volant,	Lawrence.
David McDonald,	Wampum,	Lawrence.

Distributors of Diphtheria Antitoxin—Cont'd.

Distributors.	Place.	County.
W. S. Seabold,	Annaville,	Lebanon.
Charles T. Behney,	Fredericksburg,	Lebanon.
T. M. Bross,	Jonestown,	Lebanon.
Charles E. Roger,	Lebanon,	Lebanon.
William C. Kline,	Myerstown,	Lebanon.
C. E. Bundel,	Palmyra,	Lebanon.
Mrs. S. K. Barndt,	Alburtis,	Lehigh.
*Keiper Drug Company,	Allentown,	Lehigh.
Iawall Brothers,	Catasauqua,	Lehigh.
Horn's Drug Store,	Coplay,	Lehigh.
Dr. M. J. Backenloof,	Emaus,	Lehigh.
Harry W. Dundore,	Emaus,	Lehigh.
John J. Mohr,	Fogelsville,	Lehigh.
H. D. Gross & Son,	Schnecksville,	Lehigh.
(Vacancy),	Slatington,	Lehigh.
W. T. Colborn,	Ashley,	Luzerne.
Renniman & Llewellyn,	Avoca,	Luzerne.
G. A. A. Kuehn,	Dallas,	Luzerne.
E. J. Edwards,	Drifton,	Luzerne.
W. J. Mayo,	Duryea,	Luzerne.
McMinnin & Ferry,	Freeland,	Luzerne.
Mumaw & Hughes,	Hazleton,	Luzerne.
W. F. Church,	Kingston,	Luzerne.
W. F. Gabrio,	Lattimer Mines,	Luzerne.
A. H. Edwards,	Maltby,	Luzerne.
R. H. Meyer,	Nanticoke,	Luzerne.
Dr. J. J. Myers,	Nescopeek,	Luzerne.
F. J. Quigley,	Parsons,	Luzerne.
J. L. Peck,	Pittston,	Luzerne.
Burbin's Keystone Pharmacy,	Plymouth,	Luzerne.
Dr. J. P. Friggs,	Shickshinny,	Luzerne.
F. R. Colley,	Wilkes-Barre,	Luzerne.
*W. D. White & Company,	Wilkes-Barre,	Luzerne.
Jacob Sutliff,	Hughesville,	I. yeoming.
B. E. Staples,	Jersey Shore,	I. yeoming.
John L. Miller,	Montgomery,	I. yeoming.
C. W. Harter,	Muncy,	I. yeoming.
S. G. Keys,	Ralston,	I. yeoming.
H. W. Carson,	Slate Run,	I. yeoming.
*L. L. Walton & Company,	Williamsport,	I. yeoming.
Thompson & Wood,	Bradford,	McKean.
John C. Mills,	Duke Center,	McKean.
T. L. Sartwell,	Eldred,	McKean.
Kane Drug Company,	Kane,	McKean.
C. J. Stahl & Co.,	Mt. Jewett,	McKean.
*Studholme Brothers,	Port Allegany,	McKean.
L. K. Hogarth,	Smethport,	McKean.
J. Stewart,	Clark,	Mercer.
F. H. Soult,	Fredonia,	Mercer.
*Harry D. West,	Greenville,	Mercer.
C. C. Kennedy,	Grove City,	Mercer.
T. C. Jackson,	Hadley,	Mercer.
L. W. Donaldson & Company,	Jackson Center,	Mercer.
Dr. D. H. Smith,	Jackson Center, R. D. No. 18,	Mercer.
R. O. Stanford,	Jamestown,	Mercer.
(Vacancy),	Mercer,	Mercer.
George W. Chapin,	Mercer, R. D. No. 1,	Mercer.
O. L. Mook,	New Lebanon,	Mercer.
T. A. Lafferty,	Sharon,	Mercer.
F. K. Reichard,	Sharpville,	Mercer.
E. K. Martin & Son,	Shenkleyville,	Mercer.
J. P. Hines,	Stoneboro,	Mercer.
Mrs. M. H. Hyde,	West Middlesex,	Mercer.
W. H. Spangler,	Belleville,	Mifflin.
*J. A. Muthersbough,	Lewistown,	Mifflin.
William F. Roche,	McVeytown,	Mifflin.
Nor Thompson & Son,	Milroy,	Mifflin.
Henry B. Shaver,	Newton Hamilton,	Mifflin.
Estate J. A. Butler,	Reedsville,	Mifflin.
J. A. Stotz,	Brodheads ville,	Monroe.
J. A. Segulne,	Cresco,	Monroe.
Red Cross Pharmacy,	East Stroudsburg,	Monroe.
Dr. D. C. Trach,	Kresgeville,	Monroe.
*Steward Flagler,	Stroudsburg,	Monroe.
Dr. A. A. Wertman,	Tannersville,	Monroe.
Dr. George H. Rhoads,	Tobyhanna,	Monroe.

Distributors of Diphtheria Antitoxin—Cont'd.

Distributors.	Place.	County.
*A. J. King,	Ardmore,	Montgomery.
L. Stanley King,	Bala,	Montgomery.
Estate Christian Moore,	Bryn Mawr,	Montgomery.
Joseph W. Culbert,	Collegeville,	Montgomery.
William Neville,	Conshohocken,	Montgomery.
James D. Craig,	Fort Washington,	Montgomery.
Walter Rothwell,	Hatboro,	Montgomery.
Harry A. McLaughlin,	Jenkintown,	Montgomery.
E. J. Kuhns,	Lansdale,	Montgomery.
*Curtis Huzzard,	Norristown,	Montgomery.
Child's Pharmacy,	North Wales,	Montgomery.
Randolph Wehler,	Pennsburg,	Montgomery.
C. S. Bentz,	Pottstown,	Montgomery.
G. W. Bailey,	Royersford,	Montgomery.
Pennepacker & Bromer,	Schwenkville,	Montgomery.
Frank Bunting,	Souderton,	Montgomery.
*C. Scott Eves,	Danville,	Moutour.
E. K. Eisenhart,	Bangor,	Northampton.
S. R. Miller,	Bath,	Northampton.
H. A. Burkhart,	Bethlehem,	Northampton.
C. E. Stover,	Easton,	Northampton.
*Weaver's Pharmacy,	Easton,	Northampton.
F. B. Eisenhart,	Hellertown,	Northampton.
Nelson L. Yeakel & Company,	Nazareth,	Northampton.
J. S. Scheffer,	Pen Argyl,	Northampton.
Ellsworth W. Yale,	Siegfried,	Northampton.
Metzger & Young,	South Bethlehem,	Northampton.
J. S. Krebs,	Herndon,	Northumberland.
Samuel Hollister,	Locust Gap,	Northumberland.
E. L. Keiser,	Milton,	Northumberland.
Standard Drug Store,	Mount Carmel,	Northumberland.
Zimmerman Drug Company,	Mount Carmel,	Northumberland.
S. M. G. Wenck & Son,	Northumberland,	Northumberland.
T. R. Clarkson & Company,	Shamokin,	Northumberland.
*William K. Armstrong,	Sunbury,	Northumberland.
Dr. J. S. Mengel,	Trevorton,	Northumberland.
F. Lyons,	Turbotville,	Northumberland.
John B. Dunn,	Watsonstown,	Northumberland.
Dr. D. P. Stokes,	Blain,	Perry.
E. C. Smith,	Duncannon,	Perry.
E. E. Hackedorn,	Ickesburg,	Perry.
S. M. Shuler & Sons,	Liverpool,	Perry.
B. F. Kell,	Loysville,	Perry.
Dr. E. Walter Snyder,	Marysville,	Perry.
D. A. Lehr,	Millerstown,	Perry.
*Dr. A. R. Johnston,	New Bloomfield,	Perry.
J. A. Rhea,	New Germantown,	Perry.
J. S. Eby,	Newport,	Perry.
Thomas H. Gilpin, Jr.,	Greentown,	Pike.
W. R. Shannon,	Lackawaxen,	Pike.
A. W. Balch,	Matamoras,	Pike.
*C. O. Armstrong,	Milford,	Pike.
J. O. Sinon,	Austin,	Potter.
McGee & Miller,	Costello,	Potter.
*Smith & Wood,	Coudersport,	Potter.
L. L. Emerick,	Cross Fork,	Potter.
*A. Lehman,	Galeton,	Potter.
G. F. Chapman,	Genesee,	Potter.
Dr. Charles Meine,	Germania,	Potter.
W. E. Gilbert,	Harrison Valley,	Potter.
A. E. Payne,	Oswayo,	Potter.
F. H. Hoose,	Roulette,	Potter.
G. W. Lyon,	Shingle House,	Potter.
H. K. Lane,	Ulysses,	Potter.
R. J. Williams,	Ashland,	Schuylkill.
Frank L. Brown,	Auburn,	Schuylkill.
W. D. Davis,	Coaldale,	Schuylkill.
Charles F. Beck,	Cressona,	Schuylkill.
J. A. Depew,	Delano,	Schuylkill.
William P. Holt,	Frackville,	Schuylkill.
Dr. W. J. Monaghan,	Girardville,	Schuylkill.
G. G. Hubler,	Gordon,	Schuylkill.
John McBride,	McAdoo,	Schuylkill.
H. J. Krebs,	Mahanoy City,	Schuylkill.
Estate George L. Brown,	Minersville,	Schuylkill.
W. A. Yost,	New Ringgold,	Schuylkill.
John Sutton,	Pine Grove,	Schuylkill.
R. F. Jones,	Port Carbon,	Schuylkill.

Distributors of Diphtheria Antitoxin—Cont'd.

Distributors.	Place.	County.
*William S. Cowen,	Pottsville,	Schuylkill.
Harry J. Gwincer,	Saint Clair,	Schuylkill.
G. I. Benschiger,	Schuylkill Haven,	Schuylkill.
Wasley's Pharmacy,	Shenandoah,	Schuylkill.
Louis Piz,	Shopton,	Schuylkill.
J. T. Bond,	Tamaqua,	Schuylkill.
Dr. W. A. Hawk,	Tower City,	Schuylkill.
People's Pharmacy,	Tremont,	Schuylkill.
R. R. Updegrave,	Valley View,	Schuylkill.
J. O. Wagner,	Beaver Springs,	Snyder.
Dr. E. M. Miller,	Beavertown,	Snyder.
Jerry Charles,	Freeburg,	Snyder.
Calvin Ulsb,	McClure,	Snyder.
George D. Wagonselle,	Selinsgrove,	Snyder.
*Ben Smith,	Swineford,	Snyder.
J. J. Brallier,	Berlin,	Somerset.
C. R. Sprows,	Boswell,	Somerset.
H. P. Meyers,	Confluence,	Somerset.
D. W. Livingood,	Elk Lick,	Somerset.
Dr. R. T. Pollard,	Garrett,	Somerset.
Dr. Henry A. Zimmerman,	Hollsopple,	Somerset.
Dr. Charles R. Bittner,	Hooversville,	Somerset.
F. B. Thomas,	Meyersdale,	Somerset.
Cyrus B. Moore,	New Lexington,	Somerset.
(Vacancy),	Rockwood,	Somerset.
R. P. Brandt,	Shanksville,	Somerset.
Dr. T. J. Jacobs,	Somerfield,	Somerset.
*J. S. Pickering, Jr.,	Somerset,	Somerset.
Dr. W. H. H. Schrock,	Stoyestown,	Somerset.
Home Drug Company,	Windber,	Somerset.
Charles W. Hoffa,	Dushore,	Sullivan.
M. A. Roger's Sons,	Forksville,	Sullivan.
*A. H. Buschhausen,	Laporte,	Sullivan.
Lopez Drug Company,	Lopez,	Sullivan.
Dr. H. K. Davis,	Sonestown,	Sullivan.
Davis & Allen,	Forest City,	Susquehanna.
W. D. Cox,	Hallstead,	Susquehanna.
A. D. Barnes,	Herrick Center,	Susquehanna.
A. J. Taylor,	Hopbottom,	Susquehanna.
*F. D. Morris,	Montrose,	Susquehanna.
M. A. Blair,	New Milford,	Susquehanna.
Dr. H. B. Lathrop,	Springville,	Susquehanna.
C. R. Carrington,	Susquehanna,	Susquehanna.
E. Bowen,	Blossburg,	Tioga.
T. A. Fessler,	Elkland,	Tioga.
F. L. Gilbert,	Knoxville,	Tioga.
Darling's Pharmacy,	Lawrenceville,	Tioga.
Fred. B. Miller,	Liberty,	Tioga.
John P. Bates,	Mansfield,	Tioga.
Dr. Frank Smith,	Millerton,	Tioga.
J. E. Wells,	Tioga,	Tioga.
*H. L. Blatchley,	Wellsboro,	Tioga.
Frank B. Holcomb,	Westfield,	Tioga.
Anthony Armstrong,	Allenwood,	Union.
O. W. H. Glover,	Laurelton,	Union.
Dr. T. D. Baker,	Lawsburg,	Union.
Estate J. C. Steans,	Midlinburg,	Union.
Gosser Drug Company,	Emlenton,	Venango.
*G. H. Curtis,	Franklin,	Venango.
Wilson Cross's Sons,	Kennerdell,	Venango.
A. W. Britton,	Oil City,	Venango.
Henry Strahl,	Petroleum Center,	Venango.
H. C. Zwamer,	Pleasantville,	Venango.
Charles P. Snyder,	Polk,	Venango.
L. C. Curtis,	Utica,	Venango.
R. E. Norton,	Kinzua,	Warren.
Simpson Brothers,	North Clarendon,	Warren.
Van Orsdale & Wiltsie,	Russell,	Warren.
Milton Dunn,	Sheffield,	Warren.
C. Kenble & Son,	Tidoute,	Warren.
*William S. Pierce,	Warren,	Warren.
R. L. Mead,	Youngsville,	Warren.
S. F. Caldwell,	Bentleyville,	Washington.
W. E. McCurdy,	Burgottstown,	Washington.
Piper's Drug Store,	California,	Washington.
H. M. Thompson,	Canonsburg,	Washington.

Distributors of Diphtheria Antitoxin—Cont'd.

Distributors.	Place.	County.
Piper Brothers,	Charleroi,	Washington.
J. N. Sprowl,	Claysville,	Washington.
Piper Pharmacy,	Donora,	Washington.
J. C. MacCartney,	Hickory,	Washington.
Robin's Pharmacy,	McDonald,	Washington.
J. D. Griffith,	Millsboro,	Washington.
(Vacancy),	Monongahela,	Washington.
*Valentine Brothers,	Washington,	Washington.
Dr. O. J. Mullen,	Hamlin,	Wayne.
J. S. Welsh,	Hawley,	Wayne.
*Jadwin Pharmacy,	Honesdale,	Wayne.
J. E. Tiffauy,	Pleasant Mount,	Wayne.
C. N. Pethick,	Tyler Hill,	Wayne.
J. E. Stuart,	Waymart,	Wayne.
C. E. Wehn,	Bolivar,	Westmoreland.
Mears Drug Store,	Claridge,	Westmoreland.
W. J. Zimmerman,	Delmont,	Westmoreland.
J. W. Freeman,	Derry,	Westmoreland.
H. D. Diffenderfer,	Export,	Westmoreland.
*W. K. Ehrenfeld,	Greensburg,	Westmoreland.
George W. Fink,	Irwin,	Westmoreland.
R. T. Hugus,	Jeanette,	Westmoreland.
Ralph Anderson,	Latrobe,	Westmoreland.
R. A. Will,	Ligonier,	Westmoreland.
Homer V. Naley,	Manor,	Westmoreland.
W. P. Kirk,	Monessen,	Westmoreland.
C. F. Coldsmith,	Mount Pleasant,	Westmoreland.
J. G. Cook,	New Alexandria,	Westmoreland.
Russell St. Clair,	New Florence,	Westmoreland.
D. E. Beegle,	New Kensington,	Westmoreland.
Broadway Drug Company,	Scottdale,	Westmoreland.
Charles E. Fox,	Vandergrift,	Westmoreland.
H. A. Obley,	West Newton,	Westmoreland.
Charles Besteder,	Centre Moreland,	Wyoming.
A. B. Fitch,	Factoryville,	Wyoming.
Harry M. Capwell,	Meshoppen,	Wyoming.
D. C. Vosburg & Brother,	Mill City,	Wyoming.
Estate Oscar J. Reynolds,	Nicholson,	Wyoming.
W. B. Risley,	Noxen,	Wyoming.
*H. Sickler,	Tunkhannock,	Wyoming.
G. A. Meyers,	Dallastown,	York.
T. D. Stewart,	Delta,	York.
M. W. Britcher,	Dillsburg,	York.
Dr. N. G. Wallace,	Dover,	York.
Dr. N. Allen Overmiller,	East Prospect,	York.
J. E. Seitz,	Glen Rock,	York.
Emler & Emler,	Hanover,	York.
John W. Gable,	Hallam,	York.
Paul N. Hartenstein,	New Freedom,	York.
C. W. Moody,	Red Lion,	York.
Dr. Martin Hoke,	Spring Grove,	York.
Harry Mull,	Stewartstown,	York.
Annie L. Hetrick,	Wellsville,	York.
Samuel S. Smith,	Windsor,	York.
W. P. Doucherty,	Wrightsville,	York.
*Helges & Hildebrand,	York,	York.
A. Homer Stacks,	York,	York.
Dr. E. S. Stable,	York, R. D. No. 8,	York.
Dr. J. C. Murphy,	York Haven,	York.

DIVISION OF SANITARY ENGINEERING.

*Chief Engineer, *P. Herbert Snow,*
Harrisburg, Dauphin County.

(Acting), Charles A. Emerson, Jr.,
Philadelphia.

Assistant Engineer in Charge of General Office Work—C. Howe Cummings, Philadelphia.

First Assistant Engineer on Waterworks and Sewerage—Paul Hooker, Harrisburg, Dauphin County.

Assistant Engineer on Waterworks and Sewerage—William H. Ennis, Philadelphia.

Assistant Engineer in Charge of Design and Construction—John M. Mahon, Jr., Harrisburg, Dauphin County.

Assistant Engineer on Tests of Water and Sewage—Ralph E. Irwin, Meadville, Crawford County.

Assistant Engineers—L. M. Fisher, Beve, Berks County.

Charles R. Forbes, Quarryville, Lancaster County.

J. W. Fortenbaugh, Harrisburg, Dauphin County.

I. M. Glace, Harrisburg, Dauphin County.

Coleman B. Mark, Lebanon, Lebanon County.

Howard E. Moses, Harrisburg, Dauphin County.

Samuel R. Parke, Jr., Philadelphia.

William C. Riddle, Lancaster, Lancaster County.

M. E. Shaughnessy, Lewisburg, Union County.

C. L. Siebert, Pittsburgh, Allegheny County.

A. J. Smalshaf, Pottstown, Montgomery County.

Roland B. Styer, Lancaster, Lancaster County.

Joseph A. Tinsman, Philadelphia.

L. E. Wickersham, Harrisburg, Dauphin County.

Ira F. Zeigler, Carlisle, Cumberland County.

Chief Field Inspector—Moses K. Ely, Doylestown, Bucks County.

Engineering Assistants—*Charles T. Maclay, Chambersburg, Franklin County.

*Wilson W. Ritter, Liverpool, Perry County.

Draughtsmen—J. W. German, Jr., Harrisburg, Dauphin County.

G. Douglas Andrews, Harrisburg, Dauphin County.

C. A. Eckbert, Curwensville, Clearfield County.

C. R. Krall, Harrisburg, Dauphin County.

F. M. Sourbeer, Jr., Harrisburg, Dauphin County.

*H. M. Walter, Harrisburg, Dauphin County.

G. E. Williams, Harrisburg, Dauphin County.

Clerks—Harry C. Beckley, Catawissa, Columbia County.

Andrew J. Bohl, Harrisburg, Dauphin County.

R. E. Einstein, Harrisburg, Dauphin County.

Howard M. Haines, Harrisburg, Dauphin County.

John K. Miller, Harrisburg, Dauphin County.

Daniel V. Ness, Manchester, York County.

Mrs. Nellie Pretty, Chester, Delaware County.

Miss Edith Rourke, Harrisburg, Dauphin County.

Ray E. Steward, Harrisburg, Dauphin County.

Mrs. Lila H. Trace, Harrisburg, Dauphin County.

Stenographers—*Miss M. Irene Cuenot, Harrisburg, Dauphin County.

Miss M. Louise Eckels, Carlisle, Cumberland County.

Miss Helen S. Ettinger, Carlisle, Cumberland County.

Miss Elizabeth R. Fleisher, Newport, Perry County.

*Miss Jane Gilbert, Harrisburg, Dauphin County.

Miss Leola Hannah, Meadville, Crawford County.

Miss Bula L. Koons, Penbrook, Dauphin County.

Miss Clara V. Mahaney, Mont Alto, Franklin County.

Miss Anna E. Moore, Harrisburg, Dauphin County.

Miss Nelle J. Shrum, Harrisburg, Dauphin County.

Miss Margaret Small, York, York County.

Miss Frances W. Smith, Harrisburg, Dauphin County.

Mrs. M. K. Sourbeer, Harrisburg, Dauphin County.

Sanitary Inspectors—Henry Andrews, Ardmore, Montgomery County.

James B. Aurand, Lewistown, Mifflin County.

Berkey H. Boyd, Scottdale, Westmoreland County.

Charles L. Baucher, Wilkes-Barre, Luzerne County.

James M. Clark, New Castle, Lawrence County.

W. K. Claypoole, Philadelphia.

Charles W. Collins, Butler, Butler County.
 E. I. Confer, Millmont, Union County.
 A. W. Conrad, Nicholson, Wyoming County.
 Joseph S. Couch, Oil City, Venango County.
 *Robert M. Courtney, Mt. Penn, Berks County.
 William Davis, Pittsburgh, Allegheny County.
 William Ellis, Phoenixville, Chester County.
 Simon B. Engle, Philadelphia.
 E. H. Evans, Philadelphia.
 E. A. Falter, Harrisburg, Dauphin County.
 M. Z. Frederick, West Telford, Montgomery County.
 L. S. Haldeman, Marietta, Lancaster County.
 Robert S. Hansbury, Philadelphia.
 J. M. Hellings, Philadelphia.
 E. L. Hill, New Milford, Susquehanna County.
 *W. S. Hood, Philadelphia.
 Toner A. Hugg, Milesburg, Centre County.
 L. S. Imler, Imler, Bedford County.
 D. M. Irwin, Greensburg, Westmoreland County.
 Charles P. Jarrett, Norristown, Montgomery County.
 Frank H. Lanard, Philadelphia.
 Fred C. Lidle, Philadelphia.
 Samuel S. Long, York, York County.
 J. A. McCleary, Altoona, Blair County.
 D. J. Marshall, New Castle, Lawrence County.
 H. A. Miller, Lebanon, Lebanon County.
 W. H. Morris, Duncannon, Perry County.
 T. P. Nicholson, North Wales, Montgomery County.
 Otto F. Nickel, Johnstown, Cambria County.
 J. B. Nightingale, Doylstown, Bucks County.
 *Lester L. Pierce, Towanda, Bradford County.
 W. W. Reno, Rochester, Beaver County.
 W. E. Rice, Duncannon, Perry County.
 J. W. Roebuck, Philadelphia.
 Augustus Schrink, Pottsville, Schuylkill County.
 J. H. Silliman, Tamaqua, Schuylkill County.
 Roy M. Souder, Lancaster, Lancaster County.
 *Charles H. Spelker, Pittsburgh, Allegheny County.
 Louis Stevens, Philadelphia.
 J. H. Stewart, Philadelphia.
 W. R. Teats, Burnham, Mifflin County.
 W. H. Varnick, Philadelphia.
 R. R. Waddy, Philadelphia.
 W. I. Waugaman, Sykesville, Jefferson County.
 Timothy Whelan, Clifton Heights, Delaware County.
 H. W. Whitman, Titusville, Crawford County.
 Charles E. Wirt, Sunbury, Northumberland County.
 J. C. Yeager, Lewistown, Mifflin County.
 Daniel Zellers, Lebanon, Lebanon County.

DEPUTY FIELD OFFICERS, so called because, while in the employ of a private corporation, they are deputized to represent the Commissioner of Health in inspecting the sanitary conditions of properties and reporting results to him.

H. N. Blunt, Palmerton, Carbon County.
 William G. Edmunds, Nanticoke, Luzerne County.
 Howard Seabold, Catasauqua, Lehigh County.
 E. M. Stack, Scranton, Lackawanna County.
 John Brown, Scranton, Lackawanna County.
 David Decker, Ridgway, Elk County.
 Scott Bailey, DuBois, Clearfield County.
 F. D. Eagle, Butler, Butler County.
 D. M. Watt, Butler, Butler County.
 John Coslett, Scranton, Lackawanna County.

*Resigned.

DIVISION OF ACCOUNTING AND PURCHASING.

Chief of Division, E. I. Simpson,
Philadelphia.

- Bookkeepers—Clinton T. Williams, Wellsboro, Tioga County.
Miss Bertha W. Knoke, Philadelphia.
Miss Lillian McCarty, Muncy, Lycoming County.
Miss Margaret C. Maber, Philadelphia.
- Stenographers—Miss M. Edith DeNegre, Lansdowne, Delaware County.
Miss Pauline C. Simon, Philadelphia.
Miss Lulu F. Prescott, Matamoras, Pike County.
Mrs. Adele M. Henderson, Philadelphia.
Miss Emily T. Wilson, Philadelphia.
Miss Helen B. Irwin, Harrisburg, Dauphin County.
Miss Edna E. Hoekstein, Philadelphia.
†Miss Katherine Brennan, Philadelphia.
†Miss Isabel S. Magowan, Philadelphia.
†Miss Amy S. Weil, Philadelphia.
†E. Roebuck, Philadelphia.
- Clerks—Mrs. Elizabeth R. Norton, Philadelphia.
Miss Susau A. Pike, Philadelphia.
Miss Margaret J. Hackett, Philadelphia.
Miss Florence B. Tome, Lansdowne, Delaware County.
Miss Agnes L. Devlin, Philadelphia.
Miss Celia M. Cottingham, Philadelphia.
Miss Elizabeth G. Haines, Philadelphia.
Miss May B. Taylor, Lansdowne, Delaware County.
Miss Florence K. Sheetz, Philadelphia.
Miss Maude E. Uhler, Philadelphia.
Miss Adele M. Sterr, Philadelphia.
Miss Adelaide Titus, Philadelphia.
Miss Mary MacIntosh, Philadelphia.
Miss Emma L. Bannan, Harrisburg, Dauphin County.
Miss Belle McClain, Philadelphia.
Miss Alice W. Mather, Philadelphia.
*Miss Lillian Kendall, Philadelphia.
Miss A. Adessa Fry, Harrisburg, Dauphin County.
Miss Louise Spangler, Chambersburg, Franklin County.
Miss Katherine A. Mullin, Harrisburg, Dauphin County.
Miss Martha T. Beck, Harrisburg, Dauphin County.
Miss M. Emilie Patterson, York, York County.
Miss Katharine L. Hood, Duncannon, Perry County.
Charles H. Clappier, Philadelphia.
Earl Hackman, Philadelphia.
Harry Hackman, Philadelphia.

*Transferred.

†Temporary appointments.

DIVISION OF SUPPLIES.

Superintendent, Charles Hartzell,
Philadelphia.

- Stenographer—Miss C. L. Blanning, Williamstown, Dauphin County.
*Miss C. S. Patschka, Lebanon, Lebanon County.
- Clerks—Miss S. J. Riegel, Steelton, Dauphin County.
Miss E. C. Mailey, Harrisburg, Dauphin County.
Leslie D. Seiders, Pottsville, Schuylkill County.
*Thomas D. Straughn, Shenandoah, Schuylkill County.

*Retired.

In the report of the General Inspector appear data that indicate material progress throughout the State in the local supervision of sanitary affairs through the Boards of Health. During the past year new boards to the number of one hundred and twenty-nine were established in boroughs or townships of the first class, leaving nearly as many, or one hundred and seventeen, municipalities in which the citizens are not thus protected. Among these boroughs are many small communities, such that it is difficult if not impossible to find suitable persons to form a Board of Health or to persuade them to serve. The law authorizes the Commission of Health to take charge of places of this kind which have no boards at all or when existent boards are found to be lax or inactive. The hope that all these boroughs and townships may be persuaded to find a way to create and maintain their own boards has made me unwilling to take any drastic action in the matter. In twenty-seven boroughs, however, local conditions made it necessary to put our district health officers in charge, but in eight of these places it presently became possible to withdraw this special supervision, the boroughs having established efficient Boards of Health.

The General Inspector also calls attention to the interesting fact that in Pennsylvania there are nearly six hundred villages quite comparable with the boroughs as to population and in some other respects, but which are under the direct control of the Department of Health because they are unincorporated. The population of the places in question ranges from three hundred to three thousand; two-fifths of them are villages with more than five hundred inhabitants. In many of these places the dwellings and the public utilities are similar to those found in the boroughs. The General Inspector makes the suggestion that there be established a systematic inspection of villages by our health officers in the various districts, as soon as the funds at the disposal of the Department shall permit.

In the Spring the Economy and Efficiency Commission, created by the General Assembly of 1913, asked me to prepare a detailed statement relative to the employees and expenditures of the Department of Health. This proved to be a task of considerable magnitude, as the material had to be gathered from many memoranda and accounts on file in our offices at Harrisburg and Philadelphia. Much time was given to compiling the data called for by the Commission. It is estimated that the clerical labor involved in the preparation of this report represented an expenditure of at least six hundred dollars. As quickly as practicable the information was brought together and presented to the Commission in three large volumes. The correspondence bearing on this episode follows, and needs neither explanation nor comment.

April 11, 1914.

DR. SAMUEL G. DIXON,
Commissioner of Health,
Harrisburg, Pa.

Dear Sir: The Economy and Efficiency Commission, appointed under the provisions of a Joint Resolution of the General Assembly of the Commonwealth of Pennsylvania, approved the twenty-fifth day of July, 1913, copy of which is sent you herewith, requests the following information:

1. Reference to the Acts of Assembly, giving the years and page numbers, creating and relating to your Department; also copy of rules and regulations, if any, pertaining to or relating to the same.

2. The name, compensation received, and duties actually performed by each employe. In answering this question, please do not confine yourself to the general phraseology of the Act under which the employe has been appointed, but state in detail the duties actually performed.

3. Please state after the name of each employe whether or not the position was created by statute, or is a temporary employment, made by appropriation from session to session, or appointed and paid for out of the fund commonly known as the Contingent Fund.

May I request that you give this matter your earliest attention and oblige.

Respectfully yours,
(Signed) HARRY S. McDEVITT,
Chairman.

May 22, 1914.

Hon. SAMUEL G. DIXON,
Commissioner of Health,
Harrisburg, Pa.

My Dear Dr. Dixon: It gives me great pleasure to acknowledge receipt of a report concerning your Department in answer to my inquiry of April 11th.

After a thorough examination of the contents of the three volumes, I wish to congratulate you upon the same. It is only another

demonstration of the efficiency that has marked the administration of the Department of Health since its creation and your appointment to the office of Commissioner of Health in 1905.

The report contains all the information that we desire in as succinct a form as it is possible to produce.

I beg to have the honor to remain,

Most respectfully yours,

(Signed) HARRY S. McDEVITT,

Chairman.

Fortunately the past year has not brought us large epidemics of communicable diseases, but the reports of the Division of Medical Inspection and the Division of Sanitary Engineering contain a number of illuminating narratives which clearly show how the Department endeavors to take hold of situations suggestive of serious trouble and by fitting precautions to limit impending dangers. Necessarily, not having the gift of prophecy or omniscience, we come on the field only when a certain amount of harm has already been done and nothing can possibly remove that particular damage, but even then it is important to have it determined whether further trouble is to be expected and prevent the further poisoning through whatever may be its sources. Even when an outbreak of typhoid fever, for example, is already fully established much, very much, remains to be done to ensure a rational care of the patients and to provide a supervision that precludes the further spread of the disease such as comes through careless nursing, insufficient disinfection of excreta, and the neglect of other precautions that often seem to the uninformed quite secondary and unimportant.

Instructive reading is the story of the epidemic of typhoid fever in Montgomery County along the Skippack Pike. This was clearly caused by milk, but the full appreciation of the situation when an investigation was undertaken was hindered by a lack of frankness on the part of the families to which attention was first directed. The infection of the milk came apparently from a sick man living in a part of the house occupied by a milk producer whose premises were far from sanitary and who, early in August began to deliver his milk on a route which he had recently acquired. In the course of a couple of weeks reports of illness along this route began to come in. Then and in the succeeding months one hundred and seven cases of typhoid fever, involving eleven deaths, were traced directly or indirectly to the first case although for it no cause could be determined. It is even probable that the number of persons actually infected was larger yet, for the milk in question went also to two small hotels on the Pike which were much frequented by auto-

mobile parties from far and near. It is of course impossible to tell how many persons may have acquired the disease in this way, but the outbreak as it stands has many interesting episodes.

Worthy of some attention is also the account of an outbreak of typhoid fever among the students of Lehigh University in South Bethlehem. When the cases were carefully reviewed it became evident that the persons affected must have been infected in the Commons, the dining place maintained by the University. There was little difficulty in excluding other places and in showing that the milk and other food supplies were probably uncontaminated when brought to the storerooms of the Commons, and that the water could not be made responsible for the outbreak. It seemed probable that a "carrier" had introduced the infection, and among the kitchen help was finally found a person whose medical history as well as his occupations suggested that he was the presumably innocent cause of the trouble. Only he among the persons that frequented the Commons or were employed there, after having had typhoid fever some time ago, gave a positive reaction to the test of Widal. This circumstance of itself would indicate that he still harbored the typhoid bacillus from the original attack which appears to have occurred about two years before. It was not, however, possible to demonstrate the organism in such samples of the excreta as were obtained from him at South Bethlehem and at Lewes where he was later followed. The opportunity was not altogether favorable to a treatment of excreta such as would facilitate the examination, and it is by no means certain that this man was not a carrier.

Another, but smaller, outbreak at Swissvale also illustrates the difficulty of a clear demonstration of the actual participation of a carrier even when such an agency seems very probable.

The report of the inspection regarding typhoid fever in Kittanning is also instructive because it well illustrates the utter lack of any sense of responsibility or moral obligation manifested by some of the companies engaged in supplying water to the public. In this particular instance the water company put its filters out of commission pending certain repairs and improvements, but took no steps to notify the consumers and to warn them that the water should be boiled in order to be safe to drink. Only after the lapse of some days did the County Medical Inspector learn what the situation was and even then it required some effort to bring the superintendent to issue a warning notice to the public.

Attention may also well be given to the reports on the severe outbreak of dysentery followed by typhoid fever at Grove City, which are furnished by the Division of Medical Inspection and the Division of Sanitary Engineering. This very instructive story well shows how neglect of proper precautions regarding sewage disposal may

result in serious damage through a defect in the system of water supply such that its presence and dangerous influence could hardly be anticipated.

During the past year another case of leprosy has come under the supervision of this Department and among the Special Reports of the Division of Medical Inspection may be found a history of the case and an account of the visit by the Chief Medical Inspector for a personal examination of the patient. The patient is a Syrian who has resided for some eight years in Wilkes-Barre. The symptoms developed in the Spring of 1913 and were attributed by the patient to exposure incident to his employment in a steel mill where he had worked as a wire drawer for several years. The studies made in our Laboratories demonstrate the presence of leprosy and syphilis.

The Chief Medical Inspector presents a detailed report of the medical inspection of the pupils of the schools in the Fourth Class School Districts and the results shown in his tabulations are full of interest. The number of districts included in the inspection of this school year was 2,159, nearly three times the 757 districts inspected in the school year 1911-1912, the first period of medical inspection under the School Code. The total number of pupils examined is 469,199, which is nearly three and a quarter times the number examined three years ago. Only a trifle over nine per cent. of the Fourth Class Districts declined to have a medical inspection of their schools, and many of them did this without a clear comprehension of what the inspection really is and of the benefit to be derived from it. Formerly it was my custom to print a list of the districts inspected, but the number has become so large that I now enumerate in the proper place only those districts in which the boards have voted *not* to have medical inspection, as the code permits them to do, and this list may be expected to grow smaller year by year.

The general result of the last inspection was that nearly seventy-two per cent. of the pupils examined were found to have defects such as we undertake to look for. This percentage is somewhat smaller than in the previous years. In 1913 almost seventy-three per cent. were defective; in 1912 the number was close to seventy-five per cent.; and in 1911 it was almost seventy-seven per cent. How far this improvement is a direct result of the inspections and due to the removal of individual defects which would have reappeared in successive years, it is hard to tell. It would be futile to try to draw conclusions regarding this point, not to speak of a possible influence on the community in general, until our inspection covers all the districts of this class, or at least until only the same schools are examined for a series of years.

The good done by these inspections is not capable of direct estimation. They are important because we are able through them to learn more definitely what the condition, physically and mentally, of these school children really is, and often an unexpected explanation of the backwardness of a child comes to light. The information which we send to the parents often leads to an effort to correct the defects. For this year it is reported that at least eighteen per cent. of those having defects underwent some kind of treatment looking to their removal or amelioration. This is a distinct gain over last year when only a little over eleven per cent. were thus treated. The percentage of improvement resulting from the treatment of these children is also larger than last year. A most interesting case of this kind is recorded in the summary, that of a school girl who was backward and almost "stupid," but after treatment of her tonsils and teeth made astonishing progress in a short time. This is by no means an isolated instance of the good done by a medical inspection.

The report of the Chief Medical Inspector regarding school medical inspection suggests interesting queries as to what may yet be done to supplement our work. We uncover a large number of defects among the less well to do and the communities often have no adequate means of caring for these children. Here is a very serious problem a just solution for which will bring lasting credit to those who find the means which shall enable us to care for such as much need good advice and proper treatment for their eyes, ears and teeth. The report carries the suggestion that much might be done by the development of travelling clinics or similar agencies to aid along these lines. The suggestion touches fields of endeavor the cultivation of which has already often appealed to those who have acquired an interest in these and related problems of social welfare.

In the report is included a brief summary of the inspection carried on in the Third Class School Districts. There are one hundred and eighty-nine such districts and in fifty-six of them inspections were made, but not under the supervision of the Department. From twenty-one counties certain returns were made to the Department of Health but not in sufficient detail to permit more than a very general comparison with the pupils of the Fourth Class Districts in which approximately about ten times as many pupils were examined. The percentage of defectives found was nearly sixty-nine, about three less than the percentage discovered by the departmental medical inspectors.

In connection with the inspections carried on in the Fourth Class School Districts our School Medical Inspectors and Health Officers were directed to gather information concerning the presence of feeble-

minded and epileptics in these communities who are not under institutional supervision. The reports include 1098 feeble-minded persons, of whom 558 attend school, and 345 epileptics, of whom 107 are in the public schools. Of these 1,443 persons 589 are over or under the school age.

For several years I have been chairman of a committee appointed to report on School Medical Supervision to the Conference of State and Provincial Boards of Health of North America. Various reports of a more or less preliminary character have been made from time to time, but a detailed and final form of our recommendations was presented on June 19 at one of the meetings in Washington. As the material of the report stands in close relation to our work in Pennsylvania, the entire document is here reproduced.

REPORT OF A COMMITTEE ON SCHOOL MEDICAL SUPERVISION, PRESENTED AT THE CONFERENCE OF STATE AND PROVINCIAL BOARDS OF HEALTH OF NORTH AMERICA, HELD AT WASHINGTON, D. C., JUNE 19-20, 1914.

Your Committee on School Medical Supervision begs leave to submit the following report:

History: About twenty years ago the first systematic medical supervision of public schools was begun in Amercia. Medical supervision of schools in Europe only antedates our American educators' activities by a few years. The earliest school medical supervision in this country was done more from the standpoint of the *individual child as a unit* and from the standpoint of preventing and lessening illness from the acute communicable diseases and more because of the desire of the Health Officer to cut down the morbidity from communicable diseases among children of school age than from the higher and better motives of improving the race. European workers in this field, however, seem to have started with the viewpoint of the *school as a unit* by striving to improve the physical condition of school children, to promote more regular attendance upon school work and for the purpose of rearing a sturdier stock of school children. Neither view was sufficiently broad. Each group of workers considered medical supervision from their own particular viewpoint and failed to grasp the broad gauge view of combining the lessening of morbidity rates and the increasing of school attendance with conservation of child life. However, each group of workers were pioneers in the field of School Medical Supervision and we should commend them for the results obtained.

The American Idea. In America the public health worker to-day is as much concerned with the conservation of child life and with the building up of a sturdier race of Americans as he is with the immediate results of lessening communicable disease and lessening mortality rates. We may safely predict that in this country to-day health authorities will be quick to grasp the broad gauge view and to pursue Medical Inspection of Schools with the thought in mind that, though lessening of communicable disease is necessarily to be kept in mind while performing the work, by far the most important phases of medical supervision are those of dealing with the broad problems of school hygiene by practical teaching and by medical inspection of the individual pupil and the giving of proper advice or treatment to those found defective; this may be carried even to the segregation of certain groups of diseased children while continuing their school work; to providing separate schools for the defective and incorrigibles; to providing free medicine or dental care to the poor; to surrounding the child with proper sanitary precautions in buildings and grounds, with a safe water supply; and in some instances even to supplying proper nourishment.

Your Committee is of the opinion that this broader outlook of School Medical Supervision represents the view of the modern public Health Officer and of the modern educator and that public health legislation and school legislation should be so combined that the Medical Health Officer and the educator should work shoulder to shoulder both in the medical supervision of school children and in the sanitary supervision of school premises.

The value and importance of school medical supervision during the long hours of the day and in the most important period of child life are beginning to seep into the minds of our citizens in both city and country and, with the appreciation of its benefits, it is being demanded in every state and territory. It remains for those of us actively engaged in the work to determine what methods may best be pursued to bring about the most satisfactory results. It is not a matter of very great moment, except for the compilation of statistics and the securing of uniform methods and results, whether medical supervision be brought about through local municipal ordinances or by state legislation.

Opposition. School Medical Supervision, originating in the minds of medical philanthropists in this country and promoted by them until municipalities and states have been prepared for its universal adoption, has been antagonized in certain quarters by an organization calling itself the League of Medical Freedom. This organization is composed largely of patent medicine manufacturers (who seem to contribute all the financial assistance required), assisted by other organizations, some of the members of which are

well intentioned and in many instances splendid citizens, namely; Christian Scientists, antivivisectionists and antivaccinationists. The League of Medical Freedom has taken desperate measures to defeat the application of advanced medical science as applied to school supervision.

A number of American States have passed laws within recent years permitting medical inspection of schools in all districts. Many municipalities have made medical inspection mandatory. The Commonwealth of Pennsylvania, during 1911, in the adoption of a new School Code, set a new standard for medical inspection, making it mandatory in districts of the first and second class, that is, in districts having a population of 500,000 or more and in districts having from 30,000 to 500,000 respectively. Had it not been for the activity of the League of Medical Freedom, mandatory medical supervision would also have been provided for districts of the third and fourth class, that is, municipalities with a population of 5,000 to 30,000 and municipalities of rural sections having a population of 5,000 or less, respectively.

In the same Code it is provided that school children shall be inspected at least once each school year by physicians having at least two years experience in the practice of medicine and that these physicians shall make the sanitary inspection of school grounds and school buildings; provision is made for the teaching of physiology and hygiene, including reference to alcoholic drinks and especial reference to tuberculosis and its prevention, to all pupils of all grades. The Code also provides for the establishing of open air schools and schools for the anæmic and tubercular and for the exclusion from school of those having tuberculosis of the lungs, whether a pupil, teacher, janitor, or other employee.

Activities of the League of Medical Freedom. The activities of the League of Medical Freedom and their followers during the passage of the School Code brought about some modified action on the mandatory provision referring to districts of the third and fourth class, an optional clause being inserted giving School Boards the right to decline (by resolution) medical inspection of schools in third class districts before the first day of August of each school year, and in fourth class districts before the first day of July.

The activity of this League did not end with having the optional clause inserted in the Act, but, as many of you know, they extended their campaign to the school authorities in every municipality in the United States having medical inspection or contemplating taking it up. In Pennsylvania prior to the printing and circulation of the new School Code in 1911, their literature was sent to the Secretaries in the various districts, many of whom were readily deceived by their

claims and two-thirds of the rural (fourth class), districts schools were deprived of medical inspection and supervision during the first school year. The eyes of the public seem to have been soon opened, however, so that for the second school year, instead of two-thirds of the districts having elected not to have medical inspection, only about one-third of the districts passed such resolution and more than four-fifths of all of the pupils in the public schools of the Commonwealth received the advantages of medical inspection. Careful sanitary inspection of school premises was carried out by Health Officers of the Department in fourth class districts where medical inspection was refused. The provisions of the School Code for the teaching of applied physiology and hygiene were, of course, carried out everywhere.

During the summer of 1913, the same activity was continued by the League of Medical Freedom, letters, literature, and blank forms being sent to the school directors, and yet with no opposition to this campaign put forth by the Department of Health, 362 additional school districts declined to pass resolutions against medical inspection, and a total of 1,831 school districts was inspected during the third year of the work.

Your Committee believes that the Conference of State and Provincial Boards of Health might consider taking definite action to offset the irrational teachings of this League and should counteract the efforts of these medical pretenders where their influence is greatest.

Constructive Program. Your Committee is of the opinion that medical supervision of schools should be the joint responsibility of public Health Officers and educators. The functions of the former should be devoted to those problems which only persons trained in medical and sanitary science can solve. The functions of the latter should be in the administration of correctional measures other than medical, suggested by the investigations and advice of the former. To this end supervision may be considered under five subjects.

(1) Inspection and correction of remediable defects in pupils, this to include an examination of the pupil's eyes, ears, nose, mouth, throat, superficial lymphatic glands, gross deformities, general nutrition, and evidences of disturbances of the nervous system, such as epilepsy, chorea, and tic.

(2) The prevention of communicable disease. The underlying principle is to protect public health and to this end the services of the inspector are to diagnose the disease and to take measures to detect carriers.

(3) Segregation in special schools of tubercular, mentally defective, and incorrigible pupils. The segregation of tubercular pupils is a demonstrated success in many municipalities throughout

America and the improvement in those of poor nutrition demonstrates its importance. The legislature which excludes from schools children known to have tuberculosis should also provide for their education. Special classes of schools for the mentally retarded and the defective are no longer in the experimental stage. Where necessary or practicable schools of these classes should be organized.

(4) The recognition of faulty position or postural habits or mental or physical fatigue in relation to study and recreation periods, of faulty kinds and sizes of types in text books, all should be made by one familiar with the individual needs of the pupil and should be based upon a well founded knowledge of anatomical relations and of normal and pathological physiology.

(5) Sanitation of school buildings and school grounds. We are of the opinion that medical supervision should extend to the sanitary inspection of the school buildings and grounds, and should include the problems of air space, lighting, ventilation and heat, water supply, ground drainage and sewage disposal. It should also include the arrangement of the play grounds and outside points of sewage disposal in so far as they influence the moral tone of the pupil.

In such a systematic supervision of schools the Medical Examiner occupies the position of investigator and adviser. It should be his duty to notify the health authorities of the existence of communicable diseases; to exclude carriers, to advise school authorities of the defects found in pupils and premises and to outline the corrective measures to be taken not only in relation to the individual pupil but to the pupils as a class. The duties of the school authorities should be purely administrative and should be made effectual and economical by closer cooperation with the Medical Officer.

The end attained by such investigations and administration will not be limited to the education of the child but will extend to the education of the parents. One of the great ends attained by the Kindergarten method is the lesson carried home to the mother by the child. For this reason we believe the teaching and enforcement of personal and school hygiene to the child to be one of the effectual methods of teaching its advantages to the parents.

We further believe that pedagogists should constantly be urged to keep in mind that it is their duty to help build a perfect human tabernacle; that they should continually keep before them the thought that education is but the adornment of the tabernacle and is most valuable only when developed in a good physique.

With the exception of segregation or exclusion of those suffering with communicable diseases, the power exercised by health and school authorities is purely recommendatory. Under a representative form of government it is obvious that close supervision cannot be man-

datory, hence, it is recommended that the meaning and importance of defects found in the pupil should be interpreted to the parents in a terse note of advice.

We beg leave to recommend that methods for the collection and compilation of statistics should be made uniform by using standardized forms similar to those now in use in Kansas, Vermont, and Pennsylvania. We would further recommend that standardized forms should be designed to secure statistics of the results obtained for each pupil through records which should follow the pupil from year to year. The uniform adoption of some such method will furnish a basis for accurately estimating the value of medical inspection.

In its proper place will be found the report of the State Registrar. An inspection of his tables reveals many interesting vital statistics of the past year.

The sickness of the year, in so far as it presents itself in the reports of communicable diseases, shows certain striking changes. The total number of such cases dropped to something over 140,000. For the years 1906 to 1912 the reported cases had ranged between 70,864 and 141,739 with an annual average of 113,933. In 1913 the number jumped up to 195,015 largely due to a very marked increase in measles. The drop this year is also largely due to the pronounced decrease in the number of cases of measles, this disease being less common than in any year since 1907. As compared with 1913 the decline in measles is over 66,000 cases, or nearly seventy-two per cent. of the cases reported for 1913. On the other hand a very striking increase of German measles is noted, the cases being 5,912, or much more than twice the 2,575 of 1913. Here there is probably some confusion as to distinguishing scarlet fever from this disease. Chicken pox, mumps, and whooping cough each went up twenty-five to thirty per cent. The cases of whooping cough far exceeded the record since our statistics began. For scarlet fever the report is much greater than any we have had and exceeded that of 1913 by eleven per cent. Pneumonia showed a drop of eleven per cent. but it is doubtful if this disease be reported with any completeness. There is a notable decline in the reports of typhoid fever—nearly thirty per cent. from those of a year ago. The cases are fewer than in any year of our series being less than one-third of those reported in 1906 (really thirty-one per cent.).

The deaths of the year numbered 114,832. The population of Pennsylvania is estimated as 8,246,018 which gives a death rate of 13.9 for every thousand. The decrease from 1913 by cases is 3,163 but

but on the basis of the death rate of 1913 the decrease from the expected deaths would be 4,735.

The decrease shows itself in all the groups of the International Classification except diseases of the circulatory system (of which nearly three-fourth is heart disease) and malformations. The puerperal diseases also show a very slight increase of mortality.

Particularly gratifying is the drop in the deaths attributed to typhoid fever which reached the lowest figures known in the statistics of Pennsylvania.

This is also true of diphtheria although the decline is less marked. Practically all the gain in diphtheria was for patients under ten. The remarkable decline in the prevalence of measles showed itself quite as markedly in the mortality from this disease. Notwithstanding this drop the fatality of measles was somewhat higher, assuming the cases to be as fully reported as in other years. Of the children reported as having measles slightly over two in every hundred died, and no one knows how many more were enfeebled and thus prepared to fall a prey to other diseases. This is the disease which many think "every child should have." In scarlet fever the fatality was also exceptionally low although there were nearly two thousand more cases than a year ago, but here also death is by no means the only damage done by the disease. In whooping cough the death rate fell slightly.

The mortality from tuberculosis showed a slight increase over last year but still remained lower than for any other year of the series covered by our records.

Deaths from cancer and other malignant tumors numbered 5,997 or 102.4 per cent. of those of 1913. The rate of increase is less than it has been since 1911 when the rate was only a little over the percentage increase of population. The 143 cases by which 1914 exceeded 1913 are more than covered by those charged to the buccal cavity, breast, and skin which one is tempted to suppose might have been early recognized and accessible to operation.

As to births the reports do not awaken apprehension regarding a falling rate. In fact the rate of each thousand of the population went up from 25.7 to 26.6, and was the highest of our records. For the years 1906-1913 the birth rate has ranged between 23.4 and 26.5 with an average of a trifle over 25.4. In 1914 there were born in Pennsylvania 219,542 living children, of which 113,180 were boys and 106,362 girls, or 106.4 to 100, a slightly smaller proportion of boys than last year. The twin births rose from 2,149 to 2,409, and there was one set of triplets more than in 1913. The number of illegitimate children fell to 4,001, a drop of 487, more than a tenth.

The marriage contract received the personal attention of 67,567 couples during the year, thirteen per cent. of them choosing June

for this purpose. Of the brides ninety-two were under fifteen, and seventeen were seventy or older, while a hundred and fifty-one grooms of this age period are recorded, and to thirteen of these connubial felicity was said to be a new experience; one made this venture for the fourth time.

During the year the construction of the new buildings at Hamburg went on, and such was the progress that late in October we were ready to take patients into the Pennsylvania State Sanatorium for Tuberculosis No. 3. On Saturday, October twenty-fourth, the entire establishment was opened for public inspection and I had the honor to show His Excellency, Governor Tener, every part of the plant. Together we visited the administration building, the dining room, the kitchen, the east and west wards, the power house, the laundry, the waterworks and filter beds, the sewage disposal plant, the farm and its buildings, and finally the roof gardens with their beautiful view.

No attempt was made to hold a formal reception, but a general invitation was given to the members of the General Assembly and to the physicians of Pennsylvania as well as the public, more particularly residents of Berks County, neighbors of the new Sanatorium. Another opportunity to examine the building was afforded the general public the next day and on both days, all day long, a steady stream of visitors and an extraordinary parking of automobiles demonstrated a widespread interest in our new undertaking. All our visitors seemed much pleased by what they saw.

Although the wards and other parts of the buildings were practically finished, much outside work on the grounds remained to be done. This, however, involved no delay in the reception of the patients that had been assigned to this Sanatorium and they began to arrive on Monday, October 26, when the formal opening took place.

In anticipation of this event I had appointed as Medical Director Dr. Thomas H. A. Stites, who for some years had been the Medical Inspector of the system of Tuberculosis Dispensaries of the Department. As Deputy Medical Director, I had named Dr. Bernard A. McDermott, who had been in the service of the Department as a physician to one of our Tuberculosis Dispensaries in Philadelphia. Later in the year, as elsewhere noted, I strengthened the staff by the transfer of Dr. Zabarkes from the Sanatorium at Cresson. Other appointments appear in the detailed lists.

Since the opening the Hamburg Sanatorium has quite justified our expectation of its usefulness as appears in the report made by the Medical Director and reproduced on a later page.

In the older Sanatoria there have been no important changes in the buildings or equipment such as to call for consideration in this place, except that the Cresson Sanatorium has acquired a dozen tents for special purposes. Ten of these were provided by an association of friends of the Pittsburgh Dispensary and two by friends of that at Monessen, that needy patients of these Dispensaries may come under treatment at Cresson before they could otherwise be regularly admitted. When their turns come these persons are transferred to the Sanatorium and their places in the tents are filled by others. The benefit to be derived from this opportunity to accomplish an early removal from exceptionally unfavorable surroundings has been amply demonstrated.

The reports from the Sanatoria contain the usual tables to show the changes among the patients and indicate the results attained during the year. It will be profitable to summarize some of the figures.

The cases treated in 1914 were grouped as follows:

	Incipient.	Mod. Advanced.	Far Advanced.	Total.
Mont Alto,	411	1,310	1,366	3,087
Cresson,	179	416	473	1,067
Hamburg,	4	286	264	554
	594	2,012	2,102	4,708

At the beginning of the year there were under treatment:

	Incipient.	Mod. Advanced.	Far Advanced.	Total.
Mont Alto,	155	384	386	925
Cresson,	50	121	138	309
Hamburg,	0	0	0	0
	205	505	524	1,234

The Admissions were as follows:

	Incipient.	Mod. Advanced.	Far Advanced.	Total.
Mont Alto,	256	926	980	2,162
Cresson,	129	295	334	758
Hamburg,	4	286	264	554
	389	1,507	1,578	3,474

There were discharged alive:

	Incipient.	Mod. Advanced.	Far Advanced.	Total.
Mont Alto,	282	909	728	1,919
Cresson,	116	274	226	616
Hamburg,	4	43	27	74
	402	1,226	981	2,609

The deaths in the Sanatoria were these:

	Incipient.	Mod. Advanced.	Far Advanced.	Total.
Mont Alto,	0	14	215	229
Cresson,	0	2	86	88
Hamburg,	0	3	20	23
	0	19	321	340

There remained at the end of the year:

	Incipient.	Mod. Advanced.	Far Advanced.	Total.
Mont Alto,	129	387	423	939
Cresson,	63	140	160	363
Hamburg,	0	240	217	457
	192	767	800	1,759

The tabulations of the Sanatoria permit the following combination of results regarding the cases discharged during the year.

I. Incipient, discharged as:

	Mont Alto.	Cresson.	Hamburg.	Total.
Apparently cured,	109 = 35.5%	12 = 10.3%	0 = 0.0%	112 = 27.9%
Arrested,	164 = 36.9%	73 = 62.9%	0 = 0.0%	177 = 41.0%
Improved,	65 = 23.6%	30 = 25.9%	2 = 5.0%	97 = 24.1%
Progressive,	13 = 4.6%	1 = 0.9%	2 = 5.0%	16 = 4.0%
Dead,	0 = 0.0%	0 = 0.0%	0 = 0.0%	0 = 0.0%
	282	116	4	402

II. Moderately Advanced, discharged as:

	Mont Alto.	Cresson.	Hamburg.	Total.
Apparently cured,	63 = 6.8%	4 = 1.4%	0 = 0.0%	67 = 5.4%
Arrested,	334 = 36.2%	100 = 36.2%	1 = 2.7%	435 = 34.9%
Improved,	349 = 37.8%	138 = 58.0%	51 = 67.4%	518 = 41.0%
Progressive,	163 = 17.6%	32 = 11.6%	11 = 23.9%	206 = 16.5%
Dead,	11 = 6.8%	2 = 0.7%	3 = 6.5%	19 = 1.5%
	923	276	46	1,245

III. Far Advanced, discharged as:

	Mont Alto.	Cresson.	Hamburg.	Total.
Apparently cured,	3 = 0.3%	0 = 0.0%	0 = 0.0%	3 = 0.2%
Arrested,	97 = 10.3%	19 = 6.1%	0 = 0.0%	116 = 8.9%
Improved,	263 = 27.9%	96 = 30.8%	17 = 36.2%	376 = 28.9%
Progressive,	365 = 38.7%	111 = 35.6%	10 = 21.5%	486 = 37.3%
Dead,	215 = 22.8%	86 = 27.6%	20 = 42.5%	321 = 24.6%
	943	312	47	1,302

From an examination of these figures it appears that of the incipients discharged in 1914, ninety-six per cent. had derived distinct benefit from a sojourn in a sanatorium, and for seventy-two per cent. the outlook was exceedingly favorable, they being discharged as "apparently cured" or "arrested." Among the moderately advanced cases eighty-two per cent. had been helped, and for forty per cent. the prognosis was very favorable. For the far advanced cases not so much is to be expected, but even here thirty-eight per cent. had gained by their stay, and nine per cent. had a very good prospect of remaining in good condition.

It is also worth while to glance at the results attained in our three Sanatoria since the establishment of this service in 1907. In the report from Mont Alto we have a tabulation of the discharge of 12,074 patients for the period 1907-1914. For Cresson we have in the last annual report and in this records of 1913 and 1914 relating to 1316 cases. For Hamburg we have of course only the relatively insignificant figures of the last two months of 1914. Concerning these 14,487 patients, of whom 1,808 were incipient, 5,218 moderately

advanced, and 7,461 far advanced cases, a summary of the results with the percentage in round numbers is here presented.

I. Incipient, discharged as:				
	Mont Alto.	Cresson.	Hamburg.	Total.
Apparently cured,	261 = 17 %	25 = 10 %	0 = 0 %	286 = 16 %
Arrested,	588 = 37 %	132 = 56 %	0 = 0 %	720 = 40 %
Improved,	595 = 38 %	74 = 31 %	2 = 50 %	671 = 37 %
Progressive,	120 = 8 %	4 = 2 %	2 = 50 %	126 = 7 %
Dead,	3 = 0.2%	2 = 1 %	0 = 0 %	5 = 0.3%
	1,567	237	4	1,808
II. Moderately Advanced, discharged as:				
Apparently cured,	213 = 4 %	6 = 1 %	0 = 0 %	219 = 4 %
Arrested,	1,478 = 30 %	153 = 33 %	1 = 2 %	1,582 = 30 %
Improved,	2,078 = 44 %	234 = 51 %	31 = 67 %	2,343 = 45 %
Progressive,	908 = 19 %	63 = 14 %	11 = 24 %	982 = 19 %
Dead,	84 = 2 %	5 = 1 %	3 = 6 %	92 = 2 %
	4,711	461	46	5,218
III. Far Advanced: discharged as:				
Apparently cured,	19 = 0.3%	3 = 0.5%	0 = 0 %	22 = 0.3%
Arrested,	586 = 16 %	44 = 7 %	0 = 0 %	630 = 8 %
Improved,	1,992 = 33 %	193 = 31 %	17 = 36 %	2,112 = 28 %
Progressive,	2,241 = 39 %	213 = 34 %	10 = 21 %	2,464 = 33 %
Dead,	1,048 = 18 %	165 = 27 %	20 = 42 %	2,233 = 30 %
	5,796	618	47	7,461

In the statistical tables of the Mont Alto Sanatorium appears a small innovation which will be of increasing interest as the figures grow yearly larger. It has been the custom to group the patients by certain social groups as "single," "married," etc. This practice has apparently been developed with the expectation that ultimately some deduction will be possible as to the relation between matrimony and tuberculosis. Any such deduction will of course need to be based on homogeneous material. Our statistics include a number of young persons who are in no proper sense of marriageable age, and a simple grouping of "single" and "married" must fail to distinguish whatever influence is to be attributed to connubiality.

Among the patients discharged the past year from the Sanatorium at Mont Alto were two hundred and thirty-one persons under fifteen, something over a fifth of all those discharged from that place. For Cresson, which does not specialize in children to the same extent as Mont Alto, the proportion of such young persons was smaller, being only an eighth of the entire number discharged. When we classify our discharged cases merely as single and married the "singles" are in excess at Mont Alto and Cresson for the year by about nine to ten per cent. For the entire period of the existence of the Mont Alto Sanatorium the single persons are yet more in excess, that is by nearly fourteen per cent. If, however, we deduct the single persons who are under fifteen, as a convenient limit, the relation of the state of matrimony appears in a somewhat different light, and the married persons discharged from Mont Alto and Cresson the past year exceed the single persons who might have been married, as a

matter of reasonable age, by sixteen to twenty per cent. Among those discharged from the Hamburg Sanatorium the married persons were slightly in excess, but the figures for that Sanatorium are as yet too small to make any consideration of them profitable.

In the reports of the older Sanatoria are included tabulations of the condition of former patients as determined from the memoranda made by the Dispensary nurses who tried to trace such patients. The late opening of the Hamburg Sanatorium of course precludes its patients from consideration. The tabulations contain much material for a study of the results which may be attributed to a stay in one of our Sanatoria. The figures presented require some consideration before any valuable conclusion may be drawn.

In this upfollow for 1914 there were traced 1,608 patients that had been at Mont Alto and 293 that had been at Cresson, 1,901 in all. The upfollow of 1912 tabulated 2,867 patients that had been traced and that of 1913 included 2,306 patients traced in that year. The decline to 1,901 patients traced in 1914 is due to the fact that our staff of nurses is not large enough to carry on the regular and proper work of the Dispensaries in supervising patients now on the roll and also to trace with any attempt at completeness those persons who have been at the Sanatoria. Then, too, as will be seen in the report of the Medical Inspector of Dispensaries, there has been undertaken the past year a new upfollow of persons who have been patients of the Dispensaries but have not been treated at Mont Alto or Cresson. That all this work may be well done our corps of nurses should be much enlarged. It is not mere curiosity, nor is it merely the statistical result which gives value to an upfollow of patients that have been under treatment for tuberculosis. However important the outcome may be as a demonstration of the good done by our Dispensaries and Sanatoria, or as a guide to the conduct of these establishments, the upfollow has other results which are even more important. The tracing nurse finds many who need direction and encouragement as to the conduct of their lives and the management of the household. The "word in season" is very helpful to the tuberculous who may be backsliding from the truths that have been taught them. Many former patients who ought to be found and looked after live in places remote from the Dispensary and the distance to be travelled increases the work of the tracer. For some of our Dispensaries the problem may be solved by an enlargement of the staff. This would be the ideal solution everywhere, as the best upfollowers would be nurses of the Dispensary to which the patient belongs. For certain neighborhoods where the tracing of patients is peculiarly difficult or the distances are particularly great it may be desirable to utilize a number of nurses who for a time shall devote themselves exclusively to this service.

The 1,901 patients traced in 1914 included 394 admitted to the Sanatorium as incipient and of whom 387, or 98 per cent., were still alive at the last inspection; 846 moderately advanced cases of which 760, or 89 per cent., were still alive; and 661 far advanced cases with a survival of 375, or 57 per cent.

The returns made for these 1,901 former patients are not complete. In the tables 210 persons are noted as having "no data." This means that the tracing nurse has not turned in enough information to make possible a conclusion regarding the present status of these patients. This is not necessarily any reflection on the nurses but it is in very many cases due to the difficulty of getting intelligible replies from those to whom English, or whatever other language the nurse happens to know, is a foreign tongue. Some patients who were traced were unwilling to give any information whatever. The result is that among our 1,901 persons there are 210, or 11 per cent., concerning whom we know only that they were alive at the last visit. Statistically these cases are otherwise of no value at all as we are unable to place them in any attempt to compare the present condition and that on leaving the Sanatorium.

In former discussions of the upfollow of 1912 and 1913, it has been proposed to consider those who left the Sanatorium as "apparently cured," "arrested," or "improved" as discharged with a "favorable prognosis" because such persons might be expected to remain well or yet further to gain, provided they followed at home the instructions already given them as to the proper way to live. On the other hand a discharge as "progressive" was to be considered as a discharge with an "unfavorable prognosis" because these patients are likely to decline, and to decline rapidly when at home again. Even some of those do well, as a study of the tables will show.

The time that had elapsed at the last visit reported appears in the subdivision of the tables. As that Sanatorium was opened at the beginning of 1913 the intervals since discharge from Cresson are small. Only nine are in the column under "18-24 months," and for them the interval is probably not over twenty months. For Mont Alto the reports are spread over much longer intervals. In both tabulations a certain number, more exactly 172, and all dead, have an interval "less than six months," but most of these are persons who left the Sanatoria with little hope and died soon; a much smaller number evidently relapsed speedily at home although discharged with an outlook which was not unfavorable.

As in the other upfollows the returns are classified, and the present status of each patient is determined and tabulated as "improved," "stationary," "progressive," or "dead." These conditions have been grouped by putting the first two together as showing the

patients to be doing well or at least to be no worse after the interval in question; for the last two it suffices to say that these patients are not doing well.

On the basis of these terms, and combining the tables of Mont Alto and Cresson, it appears from the reports of 1914, that:—

Of 347 cases admitted as incipient and discharged with a favorable prognosis in the sense above explained, 309, or eighty-nine per cent., after various periods ranging from less than six months to more than forty-two months were doing well or showed no retrogression; while of eight cases of this class discharged with an unfavorable prognosis, seven, or slightly over eighty-seven per cent., showed improvement or were no worse.

Of 638 cases admitted as moderately advanced and discharged with a favorable prognosis, 472, or seventy-four per cent., were still in good condition after similar intervals; and of 102 cases of this class discharged with an unfavorable prognosis, twenty-five, a little over twenty-four per cent., showed improvement or were no worse.

And in the third class, or among the far advanced cases, of 336 persons who left the Sanatoria with a favorable prognosis, 158, or forty-seven per cent., were reported to be doing well or to be no worse after the same series of intervals as in the other two classes; while of 259 persons of this class with an unfavorable prognosis, twenty, or nearly eight per cent., showed improvement or were no worse.

In the table below these results are set forth more fully and with the elaboration that the cases discharged as "apparently cured" or "arrested" are put together (A), apart from those discharged as "improved" (B), or "progressive" (C). The classification on admission is indicated by Roman numerals.

COMBINATION OF THE UPFOLLOWS FOR MONT ALTO AND CRESSON.

Cases.		Doing Well.	Found to be	Not Doing Well.
I.	A.	270	245 = 91 %	25 = 9 %
	B.	77	64 = 83 %	13 = 17 %
	A.+B.	347	309 = 89 %	38 = 11 %
	C.	8	7 = 87.5%	1 = 12.5%
II.	A.	268	297 = 81 %	71 = 19 %
	B.	270	175 = 65 %	95 = 35 %
	A.+B.	638	472 = 74 %	166 = 26 %
	C.	102	25 = 24.5%	77 = 75.5%
III.	A.	114	75 = 66 %	39 = 34 %
	B.	222	53 = 37 %	139 = 63 %
	A.+B.	336	158 = 47 %	178 = 53 %
	C.	259	20 = 8 %	239 = 92 %

The upfollow classification "stationary" will seem to some to present a difficulty in the interpretation of the reports, and such criticism is just. As we cannot compel a former patient to come to the

Dispensary again for a new examination and a more precise determination of his condition we must do the best we can with such information as the nurses are able to gather. As the reports indicate, some of these patients do return and enable us to perfect the record but these are few. Any effort further to individualize the records would probably only add to the difficulty of interpretation. The term "improved," although somewhat elastic, is sufficiently definite for our purpose and no objection can be made to "progressive" and least of all to "dead," except that it would be desirable to know whether the deaths were really due to tuberculosis, but such knowledge is not easy to get.

It is perhaps worth while to inquire what our tables show and if we count only "improved" as indicating a satisfactory condition of the person traced. This is of course making about the worst possible interpretation of the figures since the "stationary" cases of certain groups really denote a most excellent outcome of the treatment. For some of the tables the exclusion of the interval "under six months" is desirable because here are noted many persons for whom an early death was clearly probable when they went home. Limiting our tables in this fashion the results are as follows:—

FOR THE UPFOLLOW OF 1914, MONT ALTO AND CRESSON.

Incipient cases with a favorable prognosis,	= 347	
Such returned as "improved,"	= 222	= 64.3%
Incipient cases with an unfavorable prognosis,	= 8	
Such returned as "improved,"	= 6	= 75.0%
Moderately advanced cases with a favorable prognosis,	= 633	
Such returned as "improved,"	= 307	= 48.1%
Correction by omission of reports "less than six months," gives,		48.7%
Moderately advanced cases with an unfavorable prognosis, ..	= 102	
Such returned as "improved,"	= 21	= 20.6%; corrected = 28.4%
Far advanced cases with a favorable prognosis,	= 335	
Such returned as "improved,"	= 89	= 23.5%; corrected = 28.4%
Far advanced cases with an unfavorable prognosis,	= 259	
Such returned as "improved,"	= 11	= 4.2%; corrected = 7.5%

In the reports many other details concerning these patients will be found. Particular interest attaches to the figures which give general information as to the extent to which these persons were found to be at work, but with no details as to the kind or change of occupation. This information for the two Sanatoria may be summarized thus:

I. Incipients.

	Males.	Females.
With occupational data,	167	189
Under occupational age,	62	60
Not formerly occupied,	46	43
But now occupied,	31	17
Formerly occupied,	59	86
And now occupied,	50 (85%)	71 (82%)

Of 105 men of occupational age, 81, or 77%, are occupied.

Of 129 women of occupational age, 88, or 66%, are occupied.

II. Moderately Advanced.

	Males.	Females.
With occupational data,	318	341
Under occupational age,	26	21
Not formerly occupied,	119	124
But now occupied,	60	41
Formerly occupied,	173	193
And now occupied,	127 (73%)	146 (76%)

Of 292 men of occupational age, 187, or 64%, are occupied.
Of 317 women of occupational age, 190, or 60%, are occupied.

III. Far Advanced.

	Males.	Females.
With occupational data,	170	136
Under occupational age,	1	3
Not formerly occupied,	91	56
But now occupied,	25	9
Formerly occupied,	78	77
And now occupied,	41 (52%)	53 (69%)

Of 169 men of occupational age, 66, or 39%, are occupied.
Of 133 women of occupational age, 62, or 47%, are occupied.

It appears then that of the persons here traced and found to be still alive after sanatorial treatment as incipient or moderately advanced cases, 76% of the men and 86% of the women have been able to resume their occupations or to be otherwise employed. And for these two classes, 55% of the men and 36% of the women not formerly occupied, although of occupational age, are now occupied. The proportions for those of the far advanced group are shown in the summary above.

The report of the Medical Inspector of the Tuberculosis Dispensaries gives many particulars concerning this important work of the Department. At the beginning of the year the roll of the Dispensaries carried 8,252 patients under treatment for tuberculosis. The admissions were 11,102, and 9,716 persons were discharged, so that at the end of the year the enrollment included 9,638 persons.

A new Dispensary was established at Ardmore in Montgomery County, and another was opened in connection with the Sanatorium at Hamburg. Late in the year the Dispensary at Tioga was transferred to Wellsboro in the same county.

The biological products of the tubercle bacillus were increasingly used in the treatment of selected cases, and with pronounced success. Some details regarding the doses administered in various Dispensaries are presented in extensive tabulations.

Much interest attaches to a special report of the Medical Inspector of Dispensaries on the endeavor to trace former patients of the Dispensaries that have not entered our Sanatoria, and to determine their present condition. This upfollow is the result of directions given by me some time ago that all such patients should be traced at in-

tervals of six months for two years after discharge. This is no small undertaking in view of the size of the territory covered and the limited number of nurses available for this work. This year the tracers were able to pick up some information about 5,463 such persons, some times, to be sure, merely the information that the patient sought was still alive or already dead. This is, of course, only a small part of the patients who have been "discharged" after treatment in the Dispensaries, but no marked increase in this upfollow work is to be expected with the force of tracers which we are now able to provide.

The cases traced have been out of the Dispensaries for various lengths of time and are tabulated according to the six-month intervals since discharge as the cases from the Sanatoria are tabulated in their upfollow. The Dispensary cases are grouped according to the nature of the discharge which is also an indication of the opportunity which the patients had to derive benefit from their treatment. Thus, the cases discharged because of progress towards recovery, going away as "apparently cured" or "arrested" form one group; those which removed beyond the district of the Dispensary form another group; and yet other groups contain patients who went to "institutions" in great variety outside the supervision of the Department of Health, patients who were able to put themselves in care of a family physician, and finally such patients as were dropped because of non-attendance or were excluded because of unwillingness to follow the directions given by the Dispensary physician as good discipline requires. Each of these groups is worthy of study and their tables illuminate various phases of the dispensary treatment of tuberculosis.

In the group of patients discharged as apparently cured or arrested the nurses reported concerning 1,181 persons for whom the interval since discharge ranged from less than six months to forty-two months and over. Of these, fifteen were dead, or one and three-tenths per cent., all being arrested cases, and three of them having been out over forty-two months. For 113 cases, rather less than ten per cent., the data were insufficient for a final estimate of their condition beyond the fact that these persons were still alive, some of them as much as two years and a half after discharge. We have then in this series 1,068 persons whose present status is so tabulated that comparisons are possible.

Table A, in the detailed report, shows that concerning these 1,068 persons it may be said, that:

Of the A-Incipient cases

With a favorable prognosis as:—

a. Apparently cured,	52
and arrested,	758
or =	810

Were doing well as:—
Improved or Stationary

41 + 8 =	52 =	100%
611 + 104 =	715 =	94%
or 655 + 112 =	767 =	95%

Of the A-Moderately Advanced cases

With a favorable prognosis as:—

a. Apparently cured,	34
and arrested,	223
or =	257

Were doing well as:—
Improved or Stationary

27 + 6 =	33 =	97%
166 + 39 =	205 =	90%
or 193 + 45 =	238 =	93%

Of the A-Far Advanced cases

with a favorable prognosis as arrested—
1 case is doing well as "improved,"=100%

Altogether, then, 1,006 persons of this series, or ninety-four per cent. are doing well and the remaining 62, or six per cent. had become progressive or were dead.

In this table are included 108 visits made less than six months after the cases had left the Dispensaries, but the removal of these figures improves the results only by about one per cent. or less.

As Series B are tabulated 621 cases which were referred to the family physician because it developed that the patients were able to pay for medical service. In this series is included one case of tuberculous glands, with a favorable outcome but which will be omitted to simplify the calculations, and we shall consider the remaining 620 cases, of which ninety, or fourteen and a half per cent., are dead.

The reports of Series B have 158 records with "no data" beyond the fact that the patients are still alive, or at best too little information for a final classification. This obliges us to limit our comparisons to 462 persons of this series, and of these it may be said, that:—

Of the B-Incipient cases

With a favorable prognosis as:—

a. Arrested,	16
b. Improved,	120
a + b =	136

Were doing well as:—
Improved or Stationary

13 + 3 =	16 =	100%
93 + 22 =	115 =	90%
a + b =	131 =	96%

With an unfavorable prognosis:—

c. Progressive,	43
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23 + 13 =	36 =	84%
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Of the B-Moderately Advanced cases

With a favorable prognosis as:—

a. Arrested,	9
b. Improved,	113
a + b =	122

Were doing well as:—
Improved or Stationary

6 + 1 =	7 =	78%
71 + 28 =	99 =	88%
a + b =	106 =	87%

With an unfavorable prognosis:—

c. Progressive,	74
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35 + 10 =	45 =	61%
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Of the B-Far Advanced cases

With a favorable prognosis as:—

a. Arrested,	2
b. Improved,	18
a + b =	20

Were doing well as:—
Improved or Stationary

1 + 0 =	1 =	50%
10 + 1 =	11 =	61%
a + b =	12 =	60%

With an unfavorable prognosis:—

c. Progressive,	67
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6 + 5 =	11 =	16%
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In this Series also the removal of intervals "less than six months" makes no significant change in the percentages.

In comparing the state of the patients of the B series with those of the A series we may utilize only the cases discharged as "apparently cured" or "arrested" and of these the Table B has only twenty-seven while Table A has 1,068.

In Table C will be found the report of the cases which entered "institutions" (Hospitals, County Homes, Insane Asylums, or even Jails) not directly under the supervision of the Department of Health, and were "discharged" for this purpose. This table deals with 272 persons almost exactly half of whom (135) are known to be dead and over four-fifths of these left the Dispensary service with a bad outlook. This report also carries many incomplete records which obscure the result. Because of incomplete data eighty, nearly three-tenths of the cases, are not available for further comparison.

From what remains it appears, that:

Of the C-Incipient cases

With a favorable prognosis as:—

a. Arrested,	3
b. Improved,	14
a + b =	17

Were doing well as:—
Improved or Stationary

2 + 1 =	3 =	100%
11 + 1 =	12 =	86%
a + b =	15 =	88%

With an unfavorable prognosis:—

c. Progressive,	15
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2 + 2 =	4 =	27%
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Of the C-Moderately Advanced cases

With a favorable prognosis as:—

a. Arrested,	2
b. Improved,	21
a + b =	23

Were doing well as:—
Improved or Stationary

0 + 0 =	0 =	0%
6 + 3 =	9 =	43%
a + b =	9 =	39%

With an unfavorable prognosis:—

c. Progressive,	41
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6 + 3 =	9 =	22%
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Of the C-Far Advanced cases

With a favorable prognosis as:—

a. Arrested,	1
b. Improved,	10
a + b =	11

Were doing well as:—
Improved or Stationary

0 + 1 =	1 =	100%
2 + 1 =	3 =	39%
a + b =	4 =	36.4%

With an unfavorable prognosis:—

c. Progressive,	85
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3 + 0 =	3 =	3.5%
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In Table D appear 419 patients who moved out of the district of the Dispensary in which they were enrolled and did not present themselves at another Dispensary of the State Department of Health,

as they had been urged to do. Our nurses traced 419 such persons of whom 135, nearly a third, were dead. These 419 form only about one-ninth of all the cases of "removal." In this series our information was unusually complete and only fourteen cases need to be removed because of "no data." Removing these and also a glandular case, which although doing well constitutes a statistical inconvenience, 404 cases are available for a comparison which shows, that:—

Of the D-Incipient cases

With a favorable prognosis as:—

a. Arrested,	7
b. Improved,	127
a + b =	134

Were doing well as:—
Improved or Stationary

4 + 2 =	6 =	86%
89 + 21 =	110 =	87%
a + b =	116 =	87%

With an unfavorable prognosis:—

c. Progressive,	20	9 + 6 = 15 =	75%
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Of the D-Moderately Advanced cases

With a favorable prognosis as:—

a. Arrested,	2
b. Improved,	103
a + b =	105

Were doing well as:—
Improved or Stationary

1 + 1 =	2 =	100%
56 + 19 =	75 =	73%
a + b =	77 =	73%

With an unfavorable prognosis:—

c. Progressive,	63	11 + 9 = 20 =	29%
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Of the D-Far Advanced cases

With a favorable prognosis as:—

a. Arrested,	0
b. Improved,	19

Were doing well as:—
Improved or Stationary

0 + 0 =	0 =	0%
3 + 2 =	5 =	26%

With an unfavorable prognosis:—

c. Progressive,	58	4 + 4 = 8 =	14%
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In Table E are presented reports concerning 2,744 patients whose relation to the Dispensaries was terminated because of "Non-Attendance." Of the patients traced, 243, or eight and eight-tenths per cent., were dead. The reports are remarkably available for comparison as only forty-six, less than two per cent., are noted as having "No data," leaving 2,698 persons of whom it may be said, that:—

Of the E-Incipient cases

With a favorable prognosis as:—

a. Apparently cured,	1
or Arrested,	111 = 115
b. Improved,	983
a + b =	1,098

Were doing well as:—
Improved or Stationary

1 + 0 =	1 =	100%
95 + 15 =	110 =	96%
675 + 235 =	910 =	92%
a + b =	1,011 =	93%

With an unfavorable prognosis:—

c. Progressive,	318	168 + 87 = 255 =	80%
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Of the E-Moderately Advanced cases

With a favorable prognosis as:—

a. Apparently cured,	1
or Arrested,	47 = 48
b. Improved,	665
a + b =	713

Were doing well as:—
Improved or Stationary

0 + 1 =	1 =	100%
33 + 10 =	43 =	91%
351 + 201 =	555 =	92%
a + b =	599 =	84%

CONSPICUOUS OF THE UPFOLLOW OF DISPENSARY PATIENTS.

	A*	B	C	D	E	F
Total cases with data,	1,068	463	192	401	2,698	173
I. Incipient						
With a favorable prognosis,	810	135	17	134	1,098	42
Doing well as:						
Improved,	81%	78%	76%	63%	70%	69%
Stationary,	11%	18%	12%	17%	23%	21%
or in all,	95%	96%	88%	87%	93%	90%
Prognosis unfavorable, but	0	43	15	20	318	30
Doing well as:						
Improved,		53%	13%	45%	53%	30%
Stationary,		30%	13%	30%	27%	37%
or in all,		84%	27%	75%	80%	67%
II. Moderately Advanced						
With a favorable prognosis,	257	122	23	165	713	47
Doing well as:						
Improved,	75%	63%	26%	54%	54%	67%
Stationary,	17%	24%	13%	19%	30%	19%
or in all,	93%	87%	39%	73%	81%	76%
Prognosis unfavorable, but	0	71	41	68	402	36
Doing well as:						
Improved,		47%	15%	16%	40%	17%
Stationary,		13%	7%	13%	19%	50%
or in all,		61%	22%	29%	59%	67%
III. Far Advanced						
With a favorable prognosis, ..	1	20	11	19	70	9
Doing well as:						
Improved,	100%	55%	18%	16%	23%	33%
Stationary,		5%	18%	10%	26%	22%
or in all,	100%	60%	36%	26%	64%	55%
Prognosis unfavorable, but	0	67	85	58	97	9
Doing well as:						
Improved,		9%	3%	7%	9%	22%
Stationary,		7%	0%	7%	14%	11%
or in all,		16%	3%	14%	23%	33%

*Includes only "apparently cured" and "arrested" cases.

In making any inferences from this summary it should be remembered that in only two series is the total number of cases large; in some of the subdivisions the numbers are unfortunately very small. Any comparison is limited by the fact that Series A is altogether made up of "apparently cured" and "arrested" cases. In Series B the showing for the persons referred to the family physician is exceedingly good and indicates that the patients were for the most part well treated. The progressive of the far advanced class did not do well and this was to be expected. The patients of Class C did not get on well in such "institutions" as they entered, with the exception of the small group of incipients and here the numbers are very small. The incipient cases of the D-Series did much better after moving away from the supervision of the Dispensaries than would be expected, but among the moderately advanced and the far advanced an unsatisfactory outcome becomes more and more marked. The series E and F give a most interesting result for the patients who closed their relations to the Dispensaries voluntarily but against advice and for

the small group whose treatment was terminated for disciplinary reasons. The persons of Series E had been in the Dispensaries on an average of something over fourteen months and evidently had learned the lesson taught there. With a willing spirit much may be learned in fourteen months. Evidently they felt themselves benefited, and were actually not only benefited but able to practise what they had learned.

While the nurses traced these cases information was obtained as to the working ability of many of them. This is presented in a couple of tables which deal with Series A and Series E. As these tables carry a number of entries with "no data," a certain amount of correction must be made before rational comparisons become possible. Thus corrected they show that among the cases regularly discharged, Series A, and of occupational age,

Appear 173 men as formerly occupied of whom are now occupied,....	167 = 96.5%
And 359 women as formerly occupied of whom are now occupied,....	344 = 95.8%
Altogether, of 532 such are now occupied,.....	511 = 96 %
And also	
Appear 53 men as formerly not occupied, but of whom are now occupied	41 = 77.3%
And 99 women formerly not occupied, but of whom are now occupied	52 = 52.5%
Altogether, of 152 such are now occupied,	93 = 61.2%
Of 684 persons belonging to Series A, being of occupational age and having the necessary data, are employed 604 = 88.3%.	

For those discharged because of non-attendance, Series E, there is also a table in which, after similar revision,

Appear 654 men as formerly occupied of whom are now occupied,.....	567 = 86.7%
And 923 women as formerly occupied of whom are now occupied,....	862 = 93.4%
Altogether, of 1577 such are now occupied,.....	1429 = 90.6%
And also	
Appear 91 men as formerly not occupied, but of whom are now occupied	60 = 65.9%
And 170 women as formerly not occupied, but of whom are now occupied	70 = 41.2%
Altogether, of 261 such are now occupied,.....	130 = 50 %
Of 1838 persons belonging to Series E, being of occupational age and having the necessary data, are now employed 1559 = 84.8%.	

In two of the series it was possible to gather some data relative to the returns from the employment of the persons traced. To understand the details a careful examination of the tabulated material is necessary. Summarily it may be said here that among the patients regularly discharged from the Dispensaries, Series A, 183 men had had an average weekly income before admission of \$9.50, while for 188 men at the time of the upfollow the average weekly income was reported to be \$10.16. For the women of this series the average weekly income of 112 was \$5.05 before admission, while 137 declared it to be \$5.20 when they were traced. Among the cases discharged for non-attendance, Series E, the average weekly income of 627 men had been \$10.71 before admission, but for 567 who reported their incomes it had fallen to \$10.25 at the time of the upfollow. For the women of this series the average weekly income of 271 had been \$5.37 before admission, but when upfollowed 254 declared it to be \$5.71.

The Medical Inspector of Dispensaries has prepared a table in which are classified the persons discharged from the Dispensaries of the Department from 1907 to the end of 1914. It appears that in round numbers sixty-two thousand such discharges took place, nearly seven thousand of them because of death while still enrolled. Over fourteen thousand patients have been transferred to the State Sanatoria and are to be traced as having belonged to these establishments. Some three thousand of those discharged in 1914 had probably been out of the Dispensaries too short a time to be subject to an upfollow. After making these deductions from the figures we have about thirty-eight thousand cases, more or less, to be traced as Dispensary patients, but not even the most enthusiastic could possibly expect to find them all. For nearly nine thousand, almost a quarter, information has been secured. Some of the information is very scanty and merely suffices to show that further effort is useless, as in the case of many who are now too far removed to be reached. In view of our very limited forces to be utilized in a search of this kind such a result is good.

Among the special reports I have included two papers read by Dr. A. P. Francine before the College of Physicians of Philadelphia. In one of them the general problem of the spread of tuberculosis is presented with a discussion of the factors on which is based the attack now making and yet to be made by the various forms of organized effort. In the other paper will be found an interesting historical summary of the antituberculosis campaign as hitherto conducted by public and semi-public institutions in Pennsylvania and also some reflections on the principles on which such a campaign should be founded in order to be successful. Both papers are informing and well worth a careful perusal by those who may take up this report.

In response to the wish expressed by many of our Dispensary physicians, I decided to make the Wassermann test available to them through the Laboratories of the Department. It often happens that the complications presented by a case of tuberculosis are strongly suggestive of the presence of syphilis, but with such an obscuration of the symptoms as to make the diagnosis difficult. The test itself is of such a character that our physicians cannot undertake to make it with such facilities as we are able to provide in the Dispensaries and recourse must be had to a properly equipped laboratory. In June the new line of work was taken up. I considered this service to be largely an experiment because it was by no means certain that satisfactory tests could be made with such material as the staffs of the Dispensaries would be able to send in. Up to the end of the year nearly a hundred specimens had come to the Laboratories from this source and only eleven of them proved to be unfit for examination.

Such results demonstrate very clearly that this method of making the test available is altogether practicable and it may be expected to become increasingly useful as time goes on. A tabulation of the specimens with the outcome of the examinations appears in the report from the Laboratories.

The report of the Chief of the Division of Distribution of Biological Products shows that the number of our distributing stations for Diphtheria Antitoxin has now become six hundred and seventy-six. Ten stations were added during the year and one was discontinued. Two stations were transferred to places which seemed better suited to the purpose. The stations which also distribute Tetanus Antitoxin were again increased by one, so that they now number sixty-nine.

The tables presented indicate an increase of 2,247 syringes of Diphtheria Antitoxin used for curative or immunizing purposes. The number of persons treated went up by 122, to 10,562, for those actually ill, and by 1,121, to 10,896, for those that received immunizing doses after exposure to the disease. For both groups the increase is smaller than for the preceding year. No stress should be laid on these variations from year to year since they are largely dependent on the varying prevalence of the disease and also upon the character of the outbreaks as they occur. The number of immunizing doses is of course altogether dependent on the number of incidental exposures. Our figures do permit the interpretation that there is an increasing willingness on the part of the parents among the poor to have their children receive a treatment which has proved to be so efficacious in the cure of this disease. The value of the antitoxin in this regard is shown anew by our tables in which the percentage of deaths has again dropped to a shade under nine, having been equally close to ten a year ago. It also appears that had all the cases, instead of a little over three-fifths of them, received adequate doses on what is reported to have been the first day of the disease the fatality for those thus treated would have been well under seven per cent. How much less the fatality might become were all cases actually seen and properly treated in the early stages it is hard to say, but there is no question that a very great reduction is possible. The large general table shows that in some 41,000 cases treated on the "first day" the fatality has been a trifle over 5.6%, but this figure would have been yet smaller had larger doses of the antitoxin been freely used. A student of these figures will naturally ask how it happens that the results given in the general table are so distinctly less good for the first and second day in the years 1912-1914 than those which the results of the years that immediately precede them would lead us to expect. An explanation is not altogether easy. The mortality from diphtheria throughout the State was somewhat higher in 1913 but in 1912 it was lower than for the two years before. I am inclined to

seek the explanation, at least in part, in the fact, which an inspection of the divisional records has brought out, that in the years 1912 and 1913 there had been marked carelessness in making the returns from some of the distributors and from many of the physicians using our antitoxin, and these irregularities were only partially corrected in 1914. If this explanation be correct then the improvement in the results presented in the report of this year should be even more manifest next year. We have no right to expect completely to eliminate death from diphtheria, for each child, each adult for the matter of that, has its own peculiar susceptibility to all the influences which an attack of diphtheria brings with it and also its own peculiar power of resistance which is not altogether the same thing.

The tables relative to Tetanus Antitoxin show that this agent is increasingly helpful to the communities reached by our distributors. The fatality of tetanus treated with the antitoxin from our supplies has dropped steadily from eighty-seven per cent. in 1910 to fifty-eight per cent. in 1914. The quantity of antitoxin used was much greater than a year ago and the cases were a little more numerous, but these things depend of course upon accidental conditions and have no general significance. Our results are as good as we may expect to have under existing circumstances, or until the disease can be recognized more promptly and receive immediate treatment.

By a Joint Resolution of the General Assembly, approved by His Excellency, Governor John K. Tener, the fifth of June, 1913, (P. L., 1913, 438), a Commission was created "to arrange for and supervise the transfer, from the Library and Museum building to the cases in the rotunda of the Capitol building, of the flags of Pennsylvania commands in the War of the Suppression of the Rebellion and the Spanish-American War, and other flags of historical value, and to arrange a proper and fitting patriotic ceremony in commemoration thereof."

In due time the organization of this Commission was completed, and it was announced that for the transfer of the flags the day widely known as "Flag Day" had been chosen, which in 1914 would be observed on the fifteenth of June.

As the nature of the ceremony became known it was apparent that old soldiers would foregather in Harrisburg in large numbers on that occasion, and that a hot day, or a series of the hot days that June sometimes brings, might mean an exposure such as aged veterans are ill-fitted to endure. Considerations of this kind led to a conference of the Governor and Adjutant General Stewart, the Secretary of the Commission in charge of the transfer of the flags, with the Commissioner of Health. In this conference it was decided that the Commissioner of Health should be placed in charge of such arrangements as seemed to be needed properly to care for any attending

the ceremony who might require medical assistance either in the form of first aid or by removal to a hospital for more prolonged treatment.

Acting in this capacity I called upon the medical members of my office force and a portion of the staff of the Harrisburg Tuberculosis Dispensary to fill positions in the relief hospital which I proposed to establish in the Capitol on that day. I also summoned the Medical Director of the Mont Alto Sanatorium for active service and directed him to loan us his ambulance for use in the parade at Harrisburg or for the rapid transport of any serious case to the Hospital. The officials of the Harrisburg Hospital readily agreed to provide for the prompt reception of any persons coming under our care during the procession or at the Capitol for whom hospital facilities seemed desirable. The Chief Visiting Dispensary Nurse was called in to take charge of the nurses who were on duty in the procession or at the Capitol. Cots were put in suitable places on the main floor of the Capitol. Emergency outfits were provided so that we should be prepared to succor even a considerable number of persons. Stretchers were at hand for the removal of any who could no longer walk.

In the actual transfer of the flags the carriers and many other veterans marched in procession for a few squares through the town before reaching the platform in front of the Capitol where the formal addresses were to be made. In this procession also went our ambulance carrying a departmental physician, a nurse, and two orderlies. In two automobiles I was accompanied by two more physicians and two nurses, all ready for any emergency which might arise. When the march was finished the ambulance was stationed near the north entrance to the Capitol that a speedy journey to the hospital could be made with any case of exceptional seriousness. The medical men went from the parade to special duty in the Capitol or were stationed about the grand stand on the lookout for any veterans who should be in need of medical help. Eight orderlies were on duty; but as the demand for their services was small they were mainly employed in carrying pails of drinking water which was much welcomed on the grand stand.

The day was not excessively warm nor had it been immediately preceded by very hot weather. The result was that our first aid outfits were not much called into service. Into the waiting room by the front door, the nearest of our stations, came one elderly veteran from a neighboring county, a little disturbed by a change to a metropolitan diet, a member of the State Police with a mild headache, and two ladies showing some slight need of restoratives and repose. Outside, on the stand or near it, three veterans received light analeptic treatment declaring themselves too little affected to enter the building to be cared for. One of these platform cases was a well-known officer

of high rank, well up in the eighties, whose sudden death at home was announced only twelve days later. This I take to be a good illustration of the narrowness of the path along which many of our visitors walked that day. A little more heat, or a little more humidity, would have meant much more harm to our old soldiers. We may well be glad to have had so little to do, but to have been ready for any emergency is also something to be proud of.

The disposition of our sanitary corps was this:—In the procession:—the first of our automobiles carried the Commissioner of Health, Dr. Samuel G. Dixon, in charge, accompanied by the Chief Medical Inspector, Dr. B. Franklin Royer, and the Chief Visiting Dispensary Nurse, Miss Alice M. O'Halloran. The other automobile carried the Medical Inspector of Dispensaries, Dr. Thomas H. A. Stites, and a nurse, Miss Butler. On the departmental ambulance was the Associate Chief Medical Inspector, Dr. Charles J. Hunt, with a nurse, Miss Shellenberger, and two orderlies. After the parade all these were on duty in the Capitol, or about the stand outside, or with the ambulance stationed near the north door.

In the Capitol our Consulting Surgeon, Dr. George B. Kunkel, was stationed in the main office of the Division of Sanitary Engineering with one of the nurses from the parade and a couple of orderlies, ready to be summoned for any surgical emergency. In the north corridor, near at hand, were placed several cots, ready for immediate use, in charge of the Chief of the Division of Distribution of Biological Products, Dr. J. Moore Campbell, and the Assistant Chief Medical Inspector, Dr. John J. Mallowney, assisted by the nurses Miss Lewis and Miss Roth. The waiting room near the main entrance, equipped with two cots and several reclining chairs, was in charge of the Assistant to the Commissioner, Dr. Joseph W. Warren, assisted by the nurse Miss Doyle.

Outside, on the stand or near at hand, were also the State Registrar, Dr. Wilmer R. Batt, the Medical Director of the Mont Alto Sanatorium, Dr. Fred. C. Johnson, and the County Medical Inspector, Dr. Clarence R. Phillips. As orderlies served Messrs. Braugher, Butterworth, Forsythe, Heister, Miller, Myers, Seiders, and Shindler.

Very soon after the beginning of the war in Europe it became evident that a most serious interference with our supplies for disinfection purposes was to be expected. The generally acceptable method for the disinfection of rooms which have been occupied by cases of communicable diseases involves the development of formaldehyde gas from its aqueous solution. This process requires the use of a certain quantity of the permanganate of potash. The amount of this substance needed for the fumigations made by our Health Officers is enormous. In the year 1913 our storekeeper had to supply 1851 "units" of disinfectants each including twenty-two pounds of

the permanganate, making a total supply of over forty thousand pounds for that year. The price of this chemical immediately started to soar and there was even reason to fear that the supply might be altogether cut off unless the war came to a speedy end.

I at once began to look about for some other substance which could replace the permanganate of potash, at least until the price should fall again within reasonable limits. With the aid of our consulting chemist experimental studies were undertaken to find a satisfactory substitute. Our search was more rapidly successful than we had dared hope, and we were soon able to announce that the dichromate of sodium could replace the permanganate of potash in disinfection outfits such as are used by us and elsewhere. The development of the gas by the use of the dichromate proved to be even more rapid than when the permanganate is employed. It was also found desirable to add a certain proportion of sulphuric acid to the solution of formaldehyde.

As soon as the new method was fully demonstrated to be practicable, I arranged for its utilization in our disinfection work, and made it known by the following brief publication in the widely read Journal of the American Medical Association (Sept. 19, 1914; vol. lxiii, p. 1025).

A SUBSTITUTE FOR POTASSIUM PERMANGANATE TO LIBERATE FORMALDEHYDE GAS FROM A WATER SOLUTION.

Samuel G. Dixon, M. D., LL. D.

Commissioner of Health, Commonwealth of Pennsylvania.

Almost immediately after the declaration of war by Germany I requested the department's chemist, Mr. Charles Lawall, to proceed at once to find a substitute for potassium permanganate that would liberate formaldehyde gas from a water solution for the purpose of disinfecting.

In the literature no mention of any other specific substance was found except in an English patent application (4885, J. S. C. I., 1908, 915), where a combination of sodium bisulphite and formaldehyde solution was acted on by potassium permanganate or other peracid salt, and the fumigation formula:

Formaldehyd, 37 per cent. solution,2 parts.
Saturated alum sulphate solution,1 part.

Eight ounces of this solution are used to 1 pound of lime to 1,000 cubic feet.

Dr. George Rosengarten suggested sodium dichromate as a cheap oxidizing agent, and hydrochloric acid to increase its energy. Lawall found on experimenting that sodium dichromate was more energetic and satisfactory in the presence of sulphuric acid.

Numerous experiments, confirmed by calculations on the relative oxidizing power of potassium permanganate and sodium dichromate, and also working out the optimum proportion of sulphuric acid, led to the conclusion that the following proportion gave the best results, which are in every way comparable to those with potassium permanganate:

Sodium dichromate 10 ounces avoirdupois.
Saturated solution of formaldehyde gas 1 pint.
Sulphuric acid, commercial, $1\frac{1}{2}$ fluid ounces.

The sulphuric acid and formaldehyde gas form a stable solution. This after it cools should be poured over the crystals of sodium dichromate spread out in a thin layer over the bottom of a vessel having ten times the capacity of the volume of ingredients used.

It was found that the process was more rapid than with potassium permanganate. This would necessitate the health officer's withdrawing promptly from a room in which the process had been started.

Lawall, when working on a small scale, found in every case a corrosive residue. Much to his surprise the residue in ten minutes was dry and pulverulent, and a galvanized bucket which had been used showed very little effect of the reaction after washing out with soap and water.

He made a quantitative determination by both the permanganate and dichromate methods to determine the amount of volatile material given off and found that in each case it approximated eight ounces avoirdupois (or about half the weight of the formaldehyde solution taken.)

As formaldehyde solution contains between thirty-five and forty per cent. of gaseous HCOH and as the residue in each case was found to be dry and particularly devoid of odor after two hours' standing, Lawall concluded that the two methods are equally effective from the quantitative standpoint.

Formaldehyde solution and commercial sulphuric acid may be kept in stock and shipped in the mixed form (ten parts of formaldehyde solution and one part sulphuric acid, both by volume). Lawall found the solution would be perfectly safe.

The solution would have to be handled with more care than the plain formaldehyde on account of the acid making it slightly corrosive.

The elimination of mosquitoes is a problem of perennial interest to sanitarians. This can be accomplished only by the destruction of the larvae or pupae which are found on the surface of streams or may occur in any open receptacle containing water. In streams and ponds certain small fish are known to be active destroyers of the larvae and other forms of aquatic animals are believed to be similarly efficient. For some time I have looked upon the duck as likely to be an important aid in this matter. Observations made on my farm have confirmed this opinion and led me to present my conclusions in a brief article in the Journal of the American Medical Association (Oct. 3, 1914; vol. lxiii, p. 1203) which I reprint below.

THE DUCK AS A PREVENTIVE AGAINST MALARIA AND YELLOW FEVER.

Samuel G. Dixon, M. D., LL. D.

Commissioner of Health, Commonwealth of Pennsylvania.

The duck is one of the greatest known enemies of the mosquito, and therefore of yellow fever and malaria. It has possibly one of the widest geographical ranges of any of the birds. It is even found in the Arctic and Antarctic regions; also in Australia, where bird life is so peculiar.

After trying the ability of fish to devour larvae and pupae of mosquitoes, with varied success, I built two dams near together on the same stream, so that each would have the same environment for the breeding of mosquitoes. Each covered nearly 1,400 square feet. In one, twenty mallard ducks, *Anas platyrhynchos*, were permitted to feed, while the other was entirely protected from water fowl, but well stocked with goldfish, *Carassius auratus*, variety *americanus*.

The one in which the ducks fed was for several months entirely free from mosquitoes, while the pond protected from ducks and stocked with fish was swarming with young insects in different cycles of life.

To the infested pond ten well fed mallard ducks, *Anas platyrhynchos*, were then admitted, and as they entered the pond they were first attracted by the larval batrachians, tadpoles. They, however, soon recognized the presence of larvae and pupae of the mosquito and immediately turned their attention to these, ravenously devouring them in preference to any other foodstuff present. At the end of twenty-four hours no pupae were to be found and in forty-eight hours only a few small larvae survived. The motion of the water, made by the ducks, of course drowned some of the insects—what proportion cannot be estimated.

For some years I have been using ducks to keep down mosquitoes in swamps that would have been very expensive to drain, but I never fully appreciated the high degree of efficiency of the duck as a destroyer of mosquito life until the foregoing test was made.

In the work of Howard, Dyar, and Knab, entitled "Mosquitoes of North and Central America and the West Indies," will be found* an essay on the destruction of the mosquito and house fly by Mr. William Beutenmueller, who expresses the opinion that aquatic birds could be used for the purpose of destroying mosquito larvae.

Mr. William Lockwood of Boston, an artist, who made a hobby of raising aquatic fowl, also expresses an opinion that the spoonbilled duck is particularly adapted to the destruction of mosquito larvae resting on the surface of the water.

Mr. McAtee of the Biological Survey found mosquitoes in the gizzard of the mallard duck. While other birds, fish, spiders, batrachians, arthropods, and reptiles are all enemies of the mosquito, none of them have such a wide geographical range and a capacity of devouring large numbers of the larvae and pupae on land and water as the duck.

Ducks can be used in ponds and swamps, both open and in jungles, and can be driven from place to place. Not only can they be generally used to keep down mosquito life but they also furnish a delicious and valuable foodstuff.

The practice of utilizing the newspapers for the dissemination of information concerning the work of the Department has been continued. In weekly "Talks" I have briefly discussed questions pertaining to public and domestic sanitation and in simple language have commented on the conduct of life from the point of view of one who would encourage sane living among his fellows. The press notices which have been brought to my attention and the very numerous letters which have come to me indicate that these talks have been widely read and approved.

The monthly "Health Bulletins" bearing the year 1914 as a date are as follows:—

- No. 54. January. The Waters of Pennsylvania. An Address before the State Board of Agriculture.
- No. 55. February. Reproduction and Race Betterment.
- No. 56. March. The Service Tuberculosis Dispensary as a Social Service.
- No. 28 revised, April. The Preparation of the Biological Products distributed by the Pennsylvania Department of Health. This Bulletin was an extensive revision of the Bulletin bearing the same title and originally issued in October, 1911.

*L. O. Howard, H. G. Dyar, and Frederick Knab:—Mosquitoes of North and Central America and the West Indies, Washington, Carnegie Institution, 1913, 1, 178.

No. 57, May.	Insanitary Bathtubs and Lavatories.
No. 58, June.	On Housing.
No. 59, July.	Medical and Sanitary Inspection of Schools of Fourth Class Districts in Pennsylvania.
No. 60, August.	Progress in Preventive Medicine in Pennsylvania since the Creation of a State Department of Health.
No. 61, September.	Certain Standards for Tuberculosis Dispensaries.
No. 62, October.	On the Upfollow of Sanatorium Patients.
No. 63, November.	Effective Rural Sanitation. End Results.
No. 64, December.	Pennsylvania's System of Tuberculosis Dispensaries.

ADDRESSES, CONFERENCES, CONVENTIONS, ETC.

As usual the year has brought many requests for addresses or papers to be given at the meetings of clubs and societies interested more or less definitely in the problems of public health and sanitation. Whenever possible such requests have been granted and I have attended the meetings or, when unable to appear in person, have sent a suitable representative. Meetings of this kind furnish an opportunity, which no farsighted official willingly neglects, to sow the seed of personal responsibility and social obligation regarding public health, even though some of the seed fall where the soil seems neither deep nor rich. I have also endeavored to give practical expression to my desire to cooperate with State and National Associations dealing with the general welfare along lines which touch the work of this Department. At many such gatherings I or a delegate have been present for active participation in the conferences and discussions as will appear below.

On January 19, the Chief Medical Inspector, Dr. B. Franklin Royer, attended a meeting of the Civic Club of Harrisburg and spoke on "School Hygiene."

On January 28, by invitation of the State Board of Agriculture I was present at one of the sessions of its meetings in the Capitol at Harrisburg and made an address on "The Waters of Pennsylvania."

On January 29, the Medical Director of Dispensaries, Dr. Thomas H. A. Stites, spoke to the Civic Club of Steelton on "Tuberculosis and the Work of the State Department of Health."

On February 9, Dr. William G. Turnbull, Medical Director of the Cresson Sanatorium, spoke in a gathering of medical students, members of the Undergraduate Medical Association of the University of Pennsylvania, on the "Sanatorium Treatment of Tuberculosis."

On February 11, the Chief Medical Inspector represented the Department at a meeting of the Philadelphia Pediatric Society and participated in a discussion in the "Symposium on Measles."

On February 19, Dr. B. Franklin Royer made a public address before the Sorosis Club of Langhorne, speaking on "Eugenics."

On February 25, Dr. John J. Mallowney, Assistant Chief Medical Inspector, made an address in the High School at Hummelstown before the students of the school, the Parents Association, and the School Directors. His subject was, "The Progress of Civilization depends largely on the Health of the People."

On April 21, the Chief Medical Inspector attended a meeting of the Lackawanna County Medical Society at Scranton and made an address on "The Activities of the State Department of Health of Pennsylvania, with a Résumé of its most striking Results." The next day he attended a meeting of the Health Officers with the County Medical Inspector in the departmental Tuberculosis Dispensary at Scranton, and on the following day was present at a similar meeting of the County Medical Inspector and the Health Officers of Wayne County at Honesdale.

On April 26, Dr. Royer went to Erie to speak to the Women's Club of that city on School Hygiene. On one evening a lantern demonstration was given, followed the next afternoon by a talk before the Club.

At the request of the York County Medical Society that the Department be represented at its annual meeting on May 7, I delegated the Associate Chief Medical Inspector, Dr. C. J. Hunt, to go to York for this purpose. Dr. Hunt addressed the Society on "The Activity of the Department." On the evening of the same day Dr. Hunt spoke in a meeting of an association of women at Camp Hill in Cumberland County.

On May 6, by my direction Dr. Royer attended a part of the meeting of the American Sanatorium Association held at the Maryland State Sanatorium at Sabillasville.

The annual meeting of the National Association for the Study and Prevention of Tuberculosis at Washington, May 7-9, I was able to attend for only a very limited time and requested Dr. B. Franklin Royer and Dr. Thomas H. A. Stites to represent the Department in as many sessions as possible. In the Historical Section Dr. Royer read for me a paper on a "Discussion of the Department's Plans of Operation in the Tuberculosis Campaign."

On May 27, by invitation of the Philadelphia County Medical Society, the Department of Health made an exhibit of relief maps, models, photographs, and charts illustrative of its work. These were displayed in a hall of the building of the College of Physicians of Philadelphia for some hours and were explained to visitors by a corps of demonstrators. At half past eight on the same day there began what had been announced as "An Evening by Department of Health, Commonwealth of Pennsylvania." On this occasion I made an introductory address on the general work of the Department and

then spoke representatives of the various Divisions to whom special topics had been assigned as follows:—

Dr. Wilmer R. Batt, Harrisburg, "Vital Statistics;" Dr. B. Franklin Royer, Harrisburg, "Medical Division;" Dr. Edgar M. Green, Easton, "County Medical Work" *i. e.* Work of the County Medical Inspector; Dr. C. J. Hunt, Harrisburg, "Administration in Typhoid Epidemics;" Mr. C. A. Emerson, Jr., Harrisburg, "Engineering Division;" Dr. J. B. Rucker, Jr., Philadelphia, "Laboratories;" Dr. A. P. Francine, Philadelphia, "Dispensaries;" Dr. W. G. Turnbull, Cresson, "Sanatoria;" Dr. S. M. Rinehart, Pittsburgh, "Philanthropic Cooperation with State Tuberculosis Work;" Dr. Ray Vera Zabarkes, Cresson Sanatorium, "Experiences as an Interne in a State Sanatorium."

On the whole this presentation of the work of the Department to the profession at large was eminently successful. At the request of the County Medical Society the medical men of Philadelphia had been invited to inspect the exhibit and hear the addresses. The attendance was large.

For June 9, I was invited to present a paper in the "State-wide Conference on Public Health conducted by the School of Politics of the Progressive Club of Greenwich, Connecticut." Despite my earnest desire to aid in this very influential development of interest in the problems of public health I could not see my way to attend this conference, and I asked Doctor Royer to act as my representative. Dr. Royer accordingly went to Greenwich and read a paper on the "Progress in Preventive Medicine in Pennsylvania since the Creation of a Department of Health."

At the annual meeting of the American Medical Association held this year at Atlantic City, June 23-25, the Department was represented in many of the sections by Dr. B. Franklin Royer and Dr. C. J. Hunt.

At the annual meeting of the Medical Society of the State of Pennsylvania, held at Pittsburgh, I was represented, on September 22d, by the Chief Medical Inspector who took part in a discussion on prolonged infectivity in Scarlet Fever.

On September 24, I was again represented by the Chief Medical Inspector at a meeting of the Homœopathic Medical Society of the State of Pennsylvania, in annual session at Galen Hall in Wernersville. In this meeting Dr. Royer spoke, dwelling on some of the more important results attained by the State Department of Health in its work.

On October 7, the Associate Chief Medical Inspector delivered an address before the Lancaster County Medical Society, and on the same day acted as my representative at the meeting of the State Federation of Charities at Carlisle.

By a Committee in charge of a "Suburban Improvement Day," to be held on October 9, at Bristol, with the cooperation of nine boroughs and eight townships of southeastern Bucks County, I was invited to be present and make an address on "Suburban Health Problems." Departmental duties precluded my personal attendance at this gathering and I was obliged to ask my Secretary to go to Bristol and read my paper for me.

On November 16, in response to an invitation of the Civic Club of Harrisburg, I attended a meeting of the Club in the auditorium of the new building of the Young Women's Christian Association. Here I was able to show a large number of instructive lantern slides to illustrate a talk on certain aspects of the housing problem.

On November 19, I joined in the Second Annual Pennsylvania Industrial Welfare and Efficiency Conference, in the Capitol at Harrisburg, and read a more formal paper on "Housing" before the Welfare Section.

The Annual Meeting of the American Public Health Association, at Jacksonville, Florida, December 1-4, was attended by the State Registrar, Dr. Wilmer R. Batt, who presented the report of a committee in the Section on Vital Statistics.

By invitation the Medical Inspector of Dispensaries Dr. Karl Schäffle gave a talk before the Board of Charities of Tamaqua, December 9th, on the "Value of the Tuberculosis Dispensary to a Community and the Relation between Dispensary and Sanatorium." In the evening Dr. Schäffle gave a similar talk in the Reformed Church of Tamaqua. In both talks emphasis was laid on the proximity of the new Sanatorium at Hamburg.

In the winter by invitation of the Ludwick Institute Committee on Instruction, free public lectures were given in the lecture hall of "The Academy of Natural Sciences of Philadelphia," January 26, by Dr. B. Franklin Royer, Chief Medical Instructor, on "Plagues and their Prevention," and on February 2, by F. Herbert Snow, Chief Engineer of the Division of Sanitary Engineering, on "Danger in Bad Water."



SPECIAL REPORTS.



ANNUAL REPORT OF THE GENERAL INSPECTOR.

BY C. W. WEBBERT.

During the first four months of the year 1914 the time of the General Inspector, other than that devoted to general office work, answering of correspondence, examination of vouchers, etc., was largely taken up assisting in the preparation of testimony for the case of the Woodman Lumber Company which was instituted in the courts of Dauphin County on July 18, 1913. Several trips were made in connection with this case to the Philadelphia office, to Cresson, Pittsburgh, and other points. This case came up for trial in the courts of Dauphin County in the month of April, 1914, Hon. Charles V. Henry, President Judge of the courts of Lebanon County, specially presiding. The Commonwealth was represented by James Scarlet, Esq., Deputy Attorney General J. E. B. Cunningham, and F. H. Hartman, Esq., specially employed to assist in securing testimony. The plaintiffs—Woodman Lumber Company—were represented by ex-Governor William A. Stone, John T. Brady, Esq., Hon. M. C. Watson, and Bruce Campbell, Esq. About one week was taken up with the introduction of testimony on behalf of the plaintiffs. The case opened for the defendant and the Commissioner of Health was called as a witness. No further testimony on behalf of the Commonwealth was introduced, and on April 25th the case was concluded, the Jury rendering a verdict in favor of the plaintiffs in the sum of \$38,000. The contract price in this case was \$249,497.00 subject to a deduction on account of change of plans amounting to \$1,436.35, leaving a net contract price of \$248,060.65 on which had been paid the amount of \$211,474.26, leaving a balance due plaintiffs of \$36,586.39, which with interest from the 1st of January, 1913, the date when the contract was practically concluded, would have amounted to \$39,330. In addition to this amount the plaintiffs claimed large sums amounting to about \$80,000.00 for alleged extras and damages. The verdict was a decided victory for the Commonwealth and supported fully the contention of the Commissioner of Health that the claims of the plaintiff were not justified and that nothing was due the contractors other than the unpaid balance of the contract price.

In the latter part of March, 1914, George W. Atherholt, local registrar of the registration district of the city of Philadelphia, who was also occupying the office of Chief of the Division of Vital Statistics of the Department of Public Health and Charities of the city of Phila-

delphia, was dismissed from his city office and Neva R. Deardorff was appointed by the Acting Director of Public Health and Charities to succeed him, thereupon the question arose between the Commonwealth and the city of Philadelphia as to whether or not under the provisions of Section 4 of the Vital Statistics Act of May 1, 1905, the appointee to the city office of Chief of the Division of Vital Statistics became ex-officio local registrar for the registration district of Philadelphia. In the meantime the appointee of the Commissioner of Health, George W. Atherholt, secured offices outside of City Hall and continued to act as local registrar. In order that this question might be determined and unnecessary duplication of work avoided, quo warranto proceedings were instituted by Attorney General John C. Bell against Neva R. Deardorff to show by what authority she attempted to exercise the duties of local registrar in and for the registration district of Philadelphia. This case was heard in the courts of Dauphin County before Hon. George Kunkel, President Judge. An opinion was rendered on the case by Judge Kunkel upholding the contention of the Department of Health and Charities of the city of Philadelphia and confirming the right of Neva R. Deardorff to be continued as local registrar. From the decision of Judge Kunkel an appeal has been taken and is now pending in the Supreme Court.

During the year 1914 there were very few reported violations of quarantine laws and only two prosecutions were ordered: one in Westmoreland County for a violation of quarantine restrictions for diphtheria, and one in Lancaster County for the failure of a physician to report cases of diphtheria. The Lancaster County case is of special interest. The defendant, Dr. W. W. Evans of Lititz, was prosecuted in 1912 and fined for similar offenses. In the present case the child he was treating died and considerable public sentiment was aroused against the physician because of his failure to report the case as diphtheria and have the premises quarantined and because he had neglected to administer antitoxin. This case was heard before a magistrate in the city of Lancaster and the defendant was fined the maximum fine of one hundred dollars and the costs of prosecution. An appeal was taken to the court of Common Pleas of Lancaster County and the case was reviewed by the Common Pleas court and the judgment of the magistrate affirmed. The defendant, Dr. Evans, has appealed from the judgment of the Common Pleas court to the Superior Court of Pennsylvania in which court the case is now pending.

In the month of February, 1914, a complaint was received from citizens of Torresdale, Philadelphia, alleging that a cemetery had been established just outside the city lines in Bucks County in Bensalem Township and in dangerous proximity to Poquessing Creek which empties into the water supply of the city of Philadelphia a

short distance above the Torresdale intake. An inspection was made by the General Inspector which confirmed the statements of the petitioners, the proposed location of the cemetery being on a tract of sloping land draining directly into the said creek but a few hundred feet away. This matter was taken up with the owners of the cemetery plot and a stipulation was entered into by the several owners to the effect that no burials should be made in that part of the tract definitely designated by meets and bounds which was on the slope toward the creek, but that burials should be restricted to another part of the tract sloping in an opposite direction and at a more remote distance from the stream. This agreement was entered of record in Bucks County and was an adjustment satisfactory to all parties.

During the month of June notices from fourth-class school districts to the effect that resolutions had been adopted not to have medical inspection for the ensuing year were received by the General Inspector, tabulated, indexed, and filed. The number of these notices received added still greater encouragement to the work of medical inspection, only 219 fourth-class districts having voted against medical inspection in contrast with 585 districts in 1913, 844 in 1912, and 1,617 in 1911. It is quite apparent that the medical inspection of schools generally is meeting with favor among the people of the State.

During the year the General Inspector visited and was in conference with the following County Medical Inspectors regarding conditions in their several districts, viz:—

Dr. S. Meigs Beyer, Jefferson Co.	Dr. T. N. McKee, Armstrong Co.
Dr. S. M. Rinchart, Allegheny Co.	Dr. S. C. Stewart, Clearfield Co.
Dr. W. E. Matthews, Cambria Co.	Dr. J. C. Reifsnyder, Lackawanna Co.
Dr. C. H. Miner, Luzerne Co.	Dr. H. L. McKown, Wyoming Co.
Dr. Joseph Scattergood, Chester Co.	Dr. C. W. Youngman, Lycoming Co.
Dr. I. M. Portser, Westmoreland Co.	Dr. S. P. Hakes, Tioga Co.
Dr. Edgar M. Green, Northampton Co.	Dr. J. T. Iams, Greene Co.
Dr. Israel Cleaver, Berks Co.	Dr. C. B. Wood, Washington Co.
Dr. W. A. Simpson, Indiana Co.	Dr. H. H. Whitcomb, Montgomery Co.
Dr. J. L. Mowery, Lancaster Co.	

and also was in conference in the office at Harrisburg with

Dr. J. R. Dickson, Adams Co.	Dr. J. T. Butz, Lehigh Co.
Dr. Walter de la M. Hill, Bedford Co.	Dr. P. P. Fisher, Mercer Co.
Dr. Joseph Findley, Blair Co.	Dr. R. H. Simmons, Northumberland,
Dr. H. D. Bashore, Cumberland Co.	Pa.
Dr. S. B. Arment, Columbia Co.	Dr. A. R. Johnston, Perry Co.
Dr. C. R. Phillips, Dauphin Co.	Dr. J. L. Christian, Sullivan Co.
Dr. H. C. Frontz, Huntingdon Co.	Dr. J. S. Miller, York Co.
Dr. A. J. Riegel, Lebanon Co.	

Sixteen special inspections were made during the year relating to the work of Health Officers of the Department, three inspections relating to the work of Stream Inspectors, and three inspections regarding the work of Medical Inspectors of Schools.

The General Inspector during the year visited the Cresson Sanatorium three times, Hamburg twice, and Mont Alto once.

The following boroughs and first-class townships were visited during the year by the General Inspector inquiring into the work of local Boards of Health, viz:—

ALLEGHENY COUNTY. Ben Avon Heights, Braddock, Carrick, Crafton, Elizabeth, North Braddock, Turtle Creek, and West Elizabeth; and Braddock, Chartiers, Mt. Lebanon, and Shaler Townships.

ARMSTRONG COUNTY. Apollo.

BEDFORD COUNTY. Hyndman.

CAMBRIA COUNTY. Ebensburg.

CHESTER COUNTY. Avondale and Kennett.

CLEARFIELD COUNTY. DuBois.

INDIANA COUNTY. Homer City.

LEBANON COUNTY. Jonestown.

LUZERNE COUNTY. Duryea, Nanticoke, Nuangola, Pittston, and Sugar Notch.

MERCER COUNTY. Farrell and Grove City.

NORTHAMPTON COUNTY. Nazareth and Wilson Township.

SCHUYLKILL COUNTY. Minersville.

TIOGA COUNTY. Tioga.

VENANGO COUNTY. Emlenton.

WASHINGTON COUNTY. Burgettstown and Charleroi.

WESTMORELAND COUNTY. Irwin and Monessen.

At the beginning of the year there were two hundred and forty-six boroughs and first-class townships in the State in which there were no Boards of Health, or if Boards of Health had been appointed they were inactive and not properly executing the health laws. During the year new Boards of Health have been established in one hundred and twenty-nine of these boroughs and townships, and are active and efficient. The majority of the boroughs not having Boards of Health are small, running considerably under five hundred in population, and in many instances the Councils have made repeated efforts to secure citizens to serve on a Board of Health, without success. New Boards of Health have been established in the following boroughs and townships, viz:—

ADAMS COUNTY. Biglerville, Littlestown, and McSherrystown.

ALLEGHENY COUNTY. Duquesne, East Pittsburgh, Edgewood, Glassport, Haysville, North Braddock, Versailles, and West Elizabeth; and Collier and Mifflin Townships.

ARMSTRONG COUNTY. Freeport.

BEAVER COUNTY. Darlington, and Shippingport, and Borough Township.

BRADFORD COUNTY. Canton, Monroe, and Wyalusing.

BUCKS COUNTY. Dublin, Langhorne, Langhorne Manor, and Newtown.

BUTLER COUNTY. Connoquenessing, Harmony, Karns City, Mars, Petrolia, and Zelenople.

CAMBRIA COUNTY. Chest Springs, Dare, Hastings, Oakhurst, Patton, and Tunnelhill.

CARBON COUNTY. Bowmanstown, East Side, and Parryville.

CENTRE COUNTY. State College.

CLINTON COUNTY. Flemington, and Loganton.

COLUMBIA COUNTY. Millville.

CUMBERLAND COUNTY. Wormleysburg.

DAUPHIN COUNTY. Paxtang, and Penbrook.

DELAWARE COUNTY. Glenolden, and Aston Township.

ERIE COUNTY. East Springfield.

FAYETTE COUNTY. Belleverson, Smithfield, and South Brownsville.

GREENE COUNTY. Jefferson.

HUNTINGDON COUNTY. Graysville, Mount Union, and Rockville.

INDIANA COUNTY. Cherrytree, Saltsburg, and Shelocta.

JUNIATA COUNTY. Port Royal.

LACKAWANNA COUNTY. Clarks Summit, Dickson City, and Dunmore.

LANCASTER COUNTY. New Holland.

LAWRENCE COUNTY. Bessemer.

LEBANON COUNTY. Myerstown, and Palmyra.

LEHIGH COUNTY. Alburtis, and Emaus.

LUZERNE COUNTY. Conyngham, Exeter, Larksville, and Swoyersville.

LYCOMING COUNTY. Muncy.

MERCER COUNTY. Clarksville, Farrell, Sharpsville, and Wheatland.

NORTHAMPTON COUNTY. Northampton, and Roseto.

NORTHUMBERLAND COUNTY. Herndon.

PERRY COUNTY. Blain, and Newport.

SCHUYLKILL COUNTY. Middleport, and St. Clair.

SOMERSET COUNTY. Addison, New Centerville, and Paint.

TIOGA COUNTY. Lawrenceville.

WASHINGTON COUNTY. Beallsville, Finleyville, Midway, New Eagle, and Roscoe.

WAYNE COUNTY. Honesdale.

WESTMORELAND COUNTY. Export, Irwin, North Belleverson, Parnassus, Suterville, and Youngstown.

YORK COUNTY. Delta, Fawn Grove, North York, Wellsville, and York New Salem.

The following boroughs and townships were without active Boards of Health on the 31st of December, 1914, viz:—

ADAMS COUNTY. New Oxford.

ALLEGHENY COUNTY. Ben Avon Heights, Braddock Township, Cheswick, Elizabeth, Lee Township, Lower St. Clair Township, Mt. Lebanon Township, and South Versailles Township.

ARMSTRONG COUNTY. Atwood, Johnetta, and Wickboro.

BEAVER COUNTY. Frankfort Springs, Glasgow, Hookstown, and Shippingport.

BEDFORD COUNTY. Pleasantville, Schellsburg, and Woodbury.

BERKS COUNTY. Bernville, and Bechtelsville.

BRADFORD COUNTY. Alba, and Monroe.

BUCKS COUNTY. Attleboro, Chalfont, Langhorne Manor, and Silverdale.

BUTLER COUNTY. Cherry Valley, Evansburg, Portersville, West Liberty, and West Sunbury.

CAMBRIA COUNTY. Cassandra, Daisytown, Ebensburg, and Loretto.

CHESTER COUNTY. Elverson.

- CLARION COUNTY.* Callensburg, and Strattanville.
- CLEARFIELD COUNTY.* Burnside, Chester Hill, Glenhope, Grampian, Mahaffey, Troutville, and Wallaceeton.
- CLINTON COUNTY.* Beech Creek.
- COLUMBIA COUNTY.* Orangeville.
- CRAWFORD COUNTY.* Centerville, Spartansburg, Venango, and Woodcock.
- CUMBERLAND COUNTY.* Shiremanstown.
- ERIE COUNTY.* Albion, Elgin, Girard, and Platea.
- GREENE COUNTY.* Rices Landing.
- HUNTINGDON COUNTY.* Broad Top City, Cassville, Mill Creek, Saltillo, and Shade Gap.
- INDIANA COUNTY.* Jacksonville, and Mechanicsburg.
- JEFFERSON COUNTY.* Big Run, Falls Creek, and Summerville.
- LACKAWANNA COUNTY.* Gouldsboro.
- LAWRENCE COUNTY.* Enon Valley, and South New Castle.
- LEBANON COUNTY.* Jonestown, and Myerstown.
- LUZERNE COUNTY.* Duryea, and Newport Township.
- LYCOMING COUNTY.* Hughesville.
- MERCER COUNTY.* Sandy Lake, Stoneboro, and West Middlesex.
- MONTGOMERY COUNTY.* Bala, Pennsburg, and West Telford.
- NORTHAMPTON COUNTY.* Walnutport, and Wilson Township.
- NORTHUMBERLAND COUNTY.* Turbotville.
- PERRY COUNTY.* New Buffalo.
- PIKE COUNTY.* Milford.
- SCHUYLKILL COUNTY.* Girardville, Port Clinton, and Westwood.
- SNYDER COUNTY.* Middleburg.
- SOMERSET COUNTY.* Benson, New Baltimore, Paint, Shanksville, Somersfield, and Stoyestown.
- SULLIVAN COUNTY.* Eagles Mere, and Laporte.
- SUSQUEHANNA COUNTY.* Little Meadows.
- TIOGA COUNTY.* Tioga.
- UNION COUNTY.* Hartleton, and New Berlin.
- VENANGO COUNTY.* Polk, and Siverly.
- WARREN COUNTY.* Clarendon, and Grand Valley.
- WASHINGTON COUNTY.* Deemston, East Washington, Long Branch, Speers, and West Middletown.
- WESTMORELAND COUNTY.* Adamsburg, Arnold, Bolivar, Donegal, East Vandergrift, Livermore, Madison, New Alexandria, North Bellevernon, and South-west Greensburg.
- WYOMING COUNTY.* Nicholson.
- YORK COUNTY.* Cross Roads, Felton, Jefferson, Loganville, Railroad, Stewartstown, and Winterstown.

The Act of June 12, 1913, authorizes the Commissioner of Health to take charge of boroughs and first-class townships not having active Boards of Health, and while no general action assuming charge of all boroughs not having health boards was taken during the year

1914, as necessity arose the following boroughs were placed under the jurisdiction of the Department's local health officers, viz:—

Hookstown, Beaver County.	Roseto, Luzerne County.
Stoyestown, Somerset County.	Avoca, Luzerne County.
Shelcta, Indiana County.	Duryea, Luzerne County.
Girardville, Schuylkill County.	Girard, Erie County.
Loretto, Cambria County.	Port Clinton, Schuylkill County.
Mechanicsburg, Indiana County.	North Belleverson, Westmoreland Co.
Bear Lake, Warren County.	Langhorne Manor, Bucks County.
Columbus, Warren County.	Pleasantville, Venango County.
Mill Creek, Huntingdon County.	Nuangola, Luzerne County.
Centerville, Crawford County.	Bechtelsville, Berks County.
Jonestown, Lebanon County.	Elverson, Chester County.
Broadtop City, Huntingdon County.	Monroe, Bradford County.
Shippingport, Beaver County.	Elgin, Erie County.
Myerstown, Lebanon County.	

and efficient Boards having been appointed and qualified in the boroughs of

North Belleverson, Westmoreland Co.	Roseto, Northampton County.
Jonestown, Lebanon County.	Langhorne Manor, Bucks County.
Shippingport, Beaver County.	Nuangola, Luzerne County.
Myerstown, Lebanon County.	Monroe, Bradford County.

charge of health affairs was again handed over to the local authorities and the Department's health officer relieved from further duty therein.

There are in the State about 575 villages ranging in population from three hundred to three thousand, which are not incorporated and which are regularly under the jurisdiction of the Department of Health and its district health officers. These villages are located as follows:—

Village.	Township.	H. O. Dist. No.	Popula- tion.
<i>ADAMS COUNTY.</i>			
Aspers,	Menallen,	151	300
Cashtown,	Franklin,	150	300
Centennial,	Mt. Pleasant,	154	300
<i>ALLEGHENY COUNTY.</i>			
Allison Park,	Hampton,	189	500
Packerstown,	Richland,	189	500
Bendling,	Upper St. Clair,	176	557
Boston,	Lincoln,	161	752
Bnola,	Forward,	159	326
Crelghton,	East Deer,	187	796
Dixmont,	Kilbuck,	182	1,600
Glen Willard,	Moon,	178	320
Groveton,	Robinson,	174	300
Job,	Penn,	166	387
Noblestown,	North Fayette,	177	600
Perryville,	Ross,	183	450
Unity Station,	Plum,	167	350
<i>ARMSTRONG COUNTY.</i>			
Bradys Bend,	Bradys Bend,	198	461
Oakland,	Mahoning,	195	341
Templeton,	Pine,	199	400

Village.	Township.	H. O. Dist. No.	Popula- tion.
BEAVER COUNTY.			
Economy,	Harmony,	209	900
Hoydale,	Big Beaver,	207	386
Smiths Ferry,	Ohio,	205	580
West Bridgewater,	Brighton,	205	348
BEDFORD COUNTY.			
Alum Bank,	West St. Clair,	213	350
Loysburg,	South Woodbury,	215	364
New Enterprise,	South Woodbury,	215	300
Osterburg,	King,	214	300
Six Mile Run,	Broad Top,	217	311
BERKS COUNTY.			
Athol,	Amity,	236	300
Douglassville,	Amity,	236	325
Little Oley,	Douglass,	237	301
Bally,	Washington,	237	570
New Berlinville,	Colebrookdale,	228	675
Bethel,	Bethel,	228	421
Mount Aetna,	Tulpehocken,	228	649
Rehrersburg,	Tulpehocken,	224	540
Blandon,	Maiden Creek,	224	615
Leesport,	Ontelaunee,	224	465
Temple,	Muhlenburg,	232	472
Bowers,	Maxatawny,	232	472
Lyon Station,	Maxatawny,	239	357
Clayton,	Hereford,	239	614
Mertztown,	Loganswamp,	235	300
Friedensburg,	Oley,	235	800
Oley,	Oley,	235	300
Stony Creek Mills,	Lower Alsace,	223	315
Geigers Mills,	Robeson,	222	425
Gibraltar,	Robeson,	222	451
Joanna,	Carnarvon,	222	400
Morgantown,	Carnarvon,	222	326
Mohrsville,	Ferry,	230	700
Shoemakersville,	Perry,	223	300
New Jerusalem,	Rockland,	223	300
Pricetown,	Ruscombmanor,	223	350
Virginville,	Richmond,	223	320
Oakbrook,	Cumru,	226	700
Robesonia,	Heidelberg,	226	550
Stouchsville,	Marion,	227	476
Shartlesville,	Upper Bern,	227	600
Strausstown,	Upper Tulpehocken,	225	930
Sinking Spring,	Spring,	224	1,000
Wernersville,	Lower Heidelberg,		
BLAIR COUNTY.			
Claysburg,	Greenfield,	245	400
BRADFORD COUNTY.			
Camptown,	Wyalusing,	256	500
East Smithfield,	Smithfield,	252	330
North Towanda,	North Towanda,	255	760
Ulster,	Ulster,	255	436
Stevensville,	Pike,	253	240
Monrocton,	Monroe,	251	290
BUCKS COUNTY.			
Andalusia,	Bensalem,	271	600
Newportville,	Bristol,	271	340
Redminster,	Bedminster,	262	300
Hagersville,	East Rock Hill,	262	314
Line Lexington,	New Britain,	262	476
Blooming Glen,	Hilltown,	263	400
Cressman,	Richland,	260	320
Springtown,	Springfield,	260	361
Shelly,	Richland,	260	300
Fallsington,	Falls,	272	400
Plumsteadville,	Plumstead,	265	358
Point Pleasant,	Plumstead,	265	321
Wycombe,	Buckingham,	265	360
Riegelsville,	Durham,	266	600
Southampton,	Southampton,	268	400

Village.	Township.	H. O. Dist. No.	Popula- tion.
<i>BUTLER COUNTY.</i>			
Argentine,	Washington,	278	350
Hilliards,	Washington,	278	323
Chicora,	Donegal,	279	1,200

CAMBRIA COUNTY.

Beaverdale,	Adams,	292	900
Blandburg,	Reade,	305	890
Dunlo,	Adams,	292	1,200
Ehrenfeld,	Crople,	291	567
Emeigh,	Susquehanna,	303	300
Nant-y-Glo,	Black Lick,	290	950
Puritan,	Portage,	294	300
St. Benedict,	Carroll,	301	550

CAMERON COUNTY.

Sinmahoning,	Grove,	306	688
Sterling Run,	Lumber,	307	430

CARBON COUNTY.

Aquascola,	Lower Towamensing,	309	350
Bowmanstown,	Lower Towamensing,	309	650
Little Gap,	Lower Towamensing,	309	374
Audenried,	Banks,	312	2,914
Tresckow,	Banks,	312	776
Packerton,	Mahoning,	305	482

CENTRE COUNTY.

Aaronsburg,	Haines,	321	400
Coburn,	Penn,	321	450
Woodward,	Haines,	321	587
Blanchard,	Liberty,	324	483
Boalsburg,	Harris,	319	417
Pine Grove Mills,	Ferguson,	319	362
Sandy Ridge,	Rush,	319	347
Lemont,	College,	318	340
Peale,	Rush,	316	686
Port Matilda,	Worth,	317	450
Potters Mills,	Potter,	320	339
Spring Mills,	Gregg,	320	500

CHESTER COUNTY.

Black Horse,	West Sadsbury,	338	346
Cochranville,	West Fallowfield,	338	400
Pomeroy,	Sadsbury,	338	385
Devon,	Easttown,	339	500
Paoli,	Tredyffrin,	330	400
Kenilworth,	North Coventry,	326	354
Parker Ford,	East Coventry,	326	400
St. Peters,	Warwick,	326	421
Kimberton,	East Pikeland,	328	300
Valley Forge,	Schuylkill,	328	518
Landenberg,	New Garden,	334	600
Toughkenamon,	New Garden,	334	400
Lincoln University,	Lower Oxford,	337	300
Nottingham,	West Nottingham,	337	300
Lionville,	West Pikeland,	329	343
Marshallton,	West Bradford,	332	613
Uniondale,	East Marlboro,	333	516

CLARION COUNTY.

Fairmount City,	Red Bank,	350	626
Foxburg,	Richland,	367	578
Fryburg,	Washington,	348	400
Lockingville,	Washington,	348	321
Knox,	Beaver,	346	1,100
Lamartine,	Salcm,	345	377
Leiper,	Farmington,	345	370
Limestonc,	Limestone,	351	313
West Monterey,	Perry,	344	480

Village.	Township.	H. O. Dist. No.	Popula- tion.
<i>CLEARFIELD COUNTY.</i>			
Ansonville,	Jordan,	364	326
Blain City,	Beccaria,	364	350
Glen Richey,	Lawrence,	363	527
W. Decatur,	Boggs,	363	300
Woodland,	Bradford,	363	800
Grassflat,	Cooper,	368	500
Kylertown,	Cooper,	368	485
Lanse,	Cooper,	368	485
Windburne,	Cooper,	368	1,100
Hawk Run,	Morris,	367	663
Morrisdale Mines,	Morris,	367	669
Munson Station,	Morris,	367	477
Karthaus,	Karthaus,	369	600
La Jose,	Chest,	357	314
Luthersburg,	Brandy,	361	364
Madera,	Bigler,	365	1,000
Penfield,	Huston,	363	716
Winterburne,	Huston,	362	301
Smoke Run,	Gulich,	365	330
<i>CLINTON COUNTY.</i>			
Bitumen,	Noyes,	378	410
Farraudsville,	Colebrook,	375	377
Lamar,	Porter,	372	310
<i>COLUMBIA COUNTY.</i>			
Espy,	Scott,	389	549
Light Street,	Scott,	389	226
Rupert,	Montour,	389	486
Jamison City,	Sugarloaf,	385	420
Lime Ridge,	Centre,	388	320
Mainville,	Main,	387	577
Mifflinville,	Mifflin,	387	541
Numidia,	Locust,	384	300
Roaring Creek,	Locust,	384	407
Wilburton,	Conyngnam,	392	1,000
<i>CRAWFORD COUNTY.</i>			
Exposition,	Summit,	407	320
<i>CUMBERLAND COUNTY.</i>			
Allen,	Monroe,	414	377
Boiling Springs,	South Middleton,	414	600
Dickinson,	Penn,	415	843
Huntsdale,	Penn,	415	310
Enola,	East Pennsboro,	412	300
Lees Cross Roads,	Southampton,	417	404
<i>DAUPHIN COUNTY.</i>			
Derry Church,	Derry,	427	326
Union Deposit,	South Hanover,	427	526
W. Hanover,	East Hanover,	427	375
Fort Hunter,	Susquehanna,	429	312
Linglestown,	Lower Paxton,	429	568
Pillow,	Mifflin,	421	550
Wiconisco,	Wiconisco,	424	2,000
<i>DELAWARE COUNTY.</i>			
Chadds Ford,	Birmingham,	430	318
Concordville,	Concord,	430	543
Essington,	Tinicum,	434	400
Manoa,	Haverford,	434	486
Glen Riddle,	Middletown,	433	499
Lima,	Middletown,	433	507
<i>ELK COUNTY.</i>			
Benezette,	Benezette,	441	413
Medix Run,	Benezette,	441	300
Weedville,	Jay,	441	320
Brockport,	Horton,	440	314
Cartwright,	Horton,	440	776
Dagus Mines,	Fox,	440	551
Kersey,	Fox,	440	600
Glen Hazel,	Jones,	437	326
Wilcox,	Jones,	437	1,037

Village.	Township.	H. O. Dist. No.	Popula- tion.
<i>ERIE COUNTY.</i>			
Lundys Lane,	Eik Creek,	446	371
McKean,	McKean,	445	430
N. Girard,	Girard,	447	875

FAYETTE COUNTY.

Adah,	German,	453	400
Adelaide,	Dunbar,	461	700
Dickerson Run,	Dunbar,	461	475
Leisenring,	Dunbar,	461	825
Brownfield,	South Union,	454	1,160
Hopwood,	North Union,	454	743
Lemont Furnace,	North Union,	454	1,000
Mt. Braddock,	North Union,	454	725
New Salem,	Menallen,	454	1,000
Oliver,	North Union,	454	1,500
Percy,	North Union,	454	750
Moyer,	Bullskin,	458	578
Newell,	Jefferson,	456	500
Perryopolis,	Perry,	460	800
Smock,	Franklin,	460	480
Waltersburg,	Franklin,	460	600

FOREST COUNTY.

Brookston,	Howe,	468	300
Clarrington,	Barnette,	468	297
Marlenville,	Jenks,	468	1,170
East Hickory,	Hickory,	467	300
Kellettville,	Kingsley,	467	500
West Hickory,	Harmony,	467	323

FRANKLIN COUNTY.

Ambersons Valley,	Fannett,	474	312
Dry Run,	Fannett,	474	400
Fannettsburg,	Metal,	474	330
Blue Ridge Summit,	Washington,	471	400
Quincy,	Quincy,	471	410
Ronzerville,	Washington,	471	312
Fayetteville,	Greene,	472	700
Scotland,	Greene,	472	320
St. Thomas,	St. Thomas,	472	410
Fort London,	Peters,	469	335
Lemasters,	Peters,	468	350
Upper Strasburg,	Letterkenny,	473	326

FULTON COUNTY.

Houstontown,	Dublin,	477	300
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GREENE COUNTY.

Rodgersville,	Centre,	482	325
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HUNTINGDON COUNTY.

McAlevys Fort,	Jackson,	500	330
McConnellstown,	Walker,	502	336
Robertsdale,	Carbon,	493	651
Rockhill Furnace,	Cromwell,	486	495
Warriors Mark,	Warriors Mark,	499	400

INDIANA COUNTY.

Black Lick,	Burrell,	512	1,000
Dixonville,	Green,	506	550
Lovejoy,	Green,	506	350
Penn Run,	Cherry Hill,	516	326
Robinson,	Whitefield,	515	400
Starford,	Green,	506	350
West Lebanon,	Young,	510	300
Heilwood,	Pine,	588	2,000

Village.	Township.	H. O. Dist. No.	Popula- tion.
<i>JEFFERSON COUNTY.</i>			
Anita,	Young,	518	2,500
Desire,	McAlmont,	518	390
Horatio,	Young,	518	1,000
Vallier,	Perry,	518	325
Walston,	Young,	518	1,937
Coal Glen,	Washington,	525	400
Rathmel,	Winslow,	525	636
Westville,	Washington,	525	496
Crenshaw,	Snyder,	524	368
<i>JUNIATA COUNTY.</i>			
East Waterford,	Tuscarora,	530	340
McAlisterville,	Fayette,	527	578
Van Wert,	Walker,	528	431
<i>LACKAWANNA COUNTY.</i>			
Chinchilla,	South Abington,	531	300
Simpson,	Fell,	532	1,200
<i>LANCASTER COUNTY.</i>			
Blue Ball,	East Earl,	539	500
Gordonville,	Leacock,	539	413
Intercourse,	Leacock,	539	420
Martindale,	Earl,	539	300
Bainbridge,	Conoy,	537	700
Bowmansville,	Brecknock,	553	400
Brownstown,	West Earl,	552	750
Brunnerville,	Warwick,	552	370
Farmersville,	West Earl,	662	362
Leacock,	Upper Leacock,	662	423
Leola,	Upper Leacock,	552	325
Lexington,	Warwick,	552	346
Rothsville,	Warwick,	552	600
Talmage,	West Earl,	552	320
Chickies,	East Donegal,	547	317
Maytown,	East Donegal,	547	702
Conestoga,	Conestoga,	541	538
Millersville,	Manor,	541	1,241
Safe Harbor,	Conestoga,	541	240
East Petersburg,	East Hempfield,	540	709
Lampeter,	West Lampeter,	540	368
Landisville,	West Hempfield,	540	600
Neffsville,	Manheim,	540	581
Oregon,	Manheim,	540	411
Rohrerstown,	East Hempfield,	540	513
Salunga,	East Hempfield,	540	335
West Willow,	Pequea,	540	350
Witmer,	East Lampeter,	540	300
Florin,	Mt. Joy,	548	763
Milton Grove,	Mt. Joy,	548	300
Goodville,	Caernarvon,	539	320
Gap,	Salisbury,	542	300
Lincoln,	Ephrata,	551	640
New Providence,	Providence,	544	400
Paradise,	Paradise,	543	478
Reamstown,	South Manheim,	540	820
<i>LAWRENCE COUNTY.</i>			
Chewton,	Wayne,	560	315
Pulaski,	Pulaski,	382	315
W. Pittsburgh,	Taylor,	564	450
Wurtemberg,	Perry,	553	491
Hillsville,	Mahoning,	564	350
<i>LEBANON COUNTY.</i>			
Avon,	South Lebanon,	566	340
Rismarck,	Cornwall,	566	575
Cleona,	North Lebanon,	566	350
Campbelltown,	South Londonderry,	568	500
East Hanover,	East Hanover,	568	327
Fredericksburg,	Bethel,	569	900
Lickdale,	Union,	569	300
Mount Zion,	Bethel,	569	483
Newmanstown,	Mill Creek,	565	612
Sheridan,	Mill Creek,	565	368
Schaefferstown,	Heidelberg,	565	950

Village.	Township.	H. O. Dist. No.	Popula- tion.
<i>LEHIGH COUNTY.</i>			
Center Valley,	Upper Saucon,	575	527
Claussville,	Low Hill,	572	329
Pogelsville,	Upper Macungie,	574	500
Litzenberg,	Upper Macungie,	574	300
Trexlerstown,	Upper Macungie,	574	613
Guths Station,	South Whitehall,	573	316
Mountainsville,	Salisbury,	573	723
New Tripoli,	Lynn,	571	450
Statedale,	Washington,	570	600
Egypt,	Whitehall,	1st class.	800
Fullerton,	Whitehall,	1st class.	614
Hokendauqua,	Whitehall,	1st class.	953

LUZERNE COUNTY.

Alderson,	Dallas,	597	386
Beach Haven,	Salem,	580	412
Driffton,	Hazle,	582	2,129
Harleigh,	Hazle,	582	585
Jeanesville,	Hazle,	582	1,070
Lattimer Mines,	Hazle,	582	1,600
Sandy Run,	Foster,	582	487
Upper Lehigh,	Foster,	582	1,200
Drums,	Butter,	583	710
Dupont,	Pittston,	594	1,099
Inkerman,	Jenkins,	594	418
Port Griffith,	Jenkins,	594	450
Yates,	Jenkins,	594	433
Gowen,	Black Creek,	579	306
Rock Glen,	Black Creek,	579	317
Maltby,	Kingston,	596	700
Pringle,	Kingston,	596	420
Mountaintop,	Fairview,	587	961
Wapwallopen,	Conyngham,	581	450
West Nanticoke,	Plymouth,	875	390
Glen Lyon,	Newport,	1st class.	3,200
Hudson,	Plains,	1st class.	2,500
Peely,	Hanover,	1st class.	965
Wanamie,	Newport,	1st class.	1,718

LYCOMING COUNTY.

Cammal,	McHenry,	598	520
Jersey Mills,	McHenry,	598	205
Slate Run,	Brown,	598	325
Lairdsville,	Franklin,	604	325
Linden,	Woodward,	607	368
Warrens ville,	Eldred,	607	642
Loyalsock,	Upper Fairfield,	606	826
Proctor,	Phinpetts Creek,	606	314
Ralston,	McIntyre,	599	610
Roaring Branch,	McIntyre,	599	400
Trout Run,	Lewis,	599	350

McKEAN COUNTY.

Clermont,	Sergeant,	610	310
Hazelhurst,	Hamlin,	610	973
Monnt Alton,	Lafayette,	610	311
Duke Center,	Otto,	613	557
Ludlow,	Hamilton,	609	507
Rixford,	Otto,	613	506

MERCER COUNTY.

Pardoe,	Findley,	622	411
Transfer,	Pymatuning,	626	340

MIFFLIN COUNTY.

Allensville,	Menno,	631	338
Belleville,	Union,	631	1,000
Mattawana,	Bratton,	628	521
Milroy,	Brown,	630	1,000
Yeagerstown,	West Derry,	629	601
Reedsville,	Brown,	630	900

MONROE COUNTY.

Brodheads ville,	Chestnut Hill,	633	654
Kunkletown,	Eldred,	633	500
Mt. Pocono,	Coalbaugh,	635	760
Tannersville,	Pocono,	635	520
Tobyhanna,	Coalbaugh,	635	610
Sailorsburg,	Hamilton,	623	320

Village.	Township.	H. O. Dist. No.	Popula- tion.
MONTGOMERY COUNTY.			
Bethayres,	Moreland,	641	318
Huntingdon Valley,	Moreland,	641	323
Willow Grove,	Moreland,	641	750
Colmar,	Hatfield,	644	300
Kulpville,	Towamensing,	644	475
Fitzwatertown,	Upper Dublin,	642	313
Ft. Washington,	Upper Dublin,	642	500
Gilbertsville,	Douglass,	651	453
Limerick,	Limerick,	651	476
Linfield,	Limerick,	651	483
New Hanover,	New Hanover,	651	406
Gulf Mills,	Upper Merion,	637	850
Port Kennedy,	Upper Merion,	637	771
Swedeland,	Upper Merion,	637	711
Harleysville,	Lower Salford,	645	450
Lafayette Hill,	Whitemarsh,	629	496
Plymouth Meeting,	Whitemarsh,	629	1,006
Spring Mill,	Whitemarsh,	629	962
Palm,	Upper Hanover,	646	300
Zieglerville,	Frederick,	646	480
Perkiomenville,	Marlboro,	647	368
Sunnertown,	Marlboro,	647	300
Skippack,	Skippack,	649	402
NORTHAMPTON COUNTY.			
Berlinsville,	Lehigh,	660	402
Danielsville,	Lehigh,	660	800
Siegfried,	Allen,	660	2,050
Martins Creek,	Lower Mt. Bethel,	661	350
NORTHUMBERLAND COUNTY.			
Delmatia,	Lower Mahanoy,	664	450
Dewart,	Delaware,	675	305
Elysburg,	Ralpho,	666	400
Keiser,	Mt. Carmel,	667	500
Locust Gap,	Mt. Carmel,	667	1,538
Strong,	Mt. Carmel,	667	660
Montandon,	West Chillisquage,	673	574
Trevorton,	Zerbe,	665	1,263
PERRY COUNTY.			
Ickesburg,	Saville,	685	430
Loysville,	Tyrone,	677	500
Shermans Dale,	Carroll,	677	572
New Bloomfield,	Center,	678	1,150
PIKE COUNTY.			
Bushkill,	Lehman,	686	350
Dingmans Ferry,	Delaware,	686	355
Lackawaxen,	Lackawaxen,	688	521
Rowland,	Lackawaxen,	688	372
POTTER COUNTY.			
Conrad,	Eulalia,	694	372
Costello,	Portage,	695	956
Mina,	Eulalia,	694	360
Cross Fork,	Stewardson,	697	736
Genesee,	Genesee,	691	600
Germania,	Abbott,	696	486
Harrison Valley,	Harrison,	690	657
Mills,	Harrison,	690	300
Ulysses,	Ulysses,	690	619
Roulette,	Roulette,	693	829
SCHUYLKILL COUNTY.			
Barnesville,	Rush,	704	440
Delano,	Delano,	704	1,090
Branch Dale,	Keilly,	714	813
Donaldson,	Fralley,	714	958
Cumbola,	Blythe,	713	320
Silver Creek,	Blythe,	713	1,500
Friedensburg,	Wayne,	698	400
Kelayres,	Kline,	705	1,150
Lavelle,	Butler,	710	610
Locustdale,	Butler,	710	954
Llewellyn,	Branch,	712	412
Lost Creek,	West Mahanoy,	709	1,455

Village.	Township.	H. O. Dist. No.	Popula- tion.
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SCHUYLKILL COUNTY—Continued.

Mahanoy Plane,	West Mahanoy,	709	2,144
Shaft,	West Mahanoy,	709	1,251
Morea Colliery,	Mahanoy,	708	903
New Boston,	Mahanoy,	708	625
Nuremberg,	North Union,	707	309
Raven Run,	West Mahanoy,	709	510
Seek,	Rahn,	702	658
Shepton,	East Mahanoy,	708	750
St. Nicholas,	East Mahanoy,	708	1,040
Tuscarora,	Schuykill,	703	550
Valley View,	Hegins,	674	580
Zelco,	West Mahanoy,	709	316
Hegins,	Hegins,	674	460
McKeanburg,	East Brunswick,	701	329

SNYDER COUNTY

Beaver Springs,	Spring,	718	550
Beavertown,	Beaver,	718	846
McClure,	West Beaver,	718	356
Penns Creek,	Centre,	718	400
Swineford,	Franklin,	718	400
Freeburg,	Washington,	720	600
Globe Mills,	Middle Creek,	720	325
Shamokin Dam,	Monroe,	720	437
Mt. Pleasant Mills,	Perry,	719	400
Port Trevorton,	Union,	719	426

SOMERSET COUNTY.

Elk Lick,	Elk Lick,	724	1,000
Hollisople,	Conemaugh,	864	600

SULLIVAN COUNTY.

Bernice,	Cherry,	736	308
Mildred,	Cherry,	736	650
Lopez,	Colley,	737	1,400
Sonestown,	Davidson,	738	310
Hillsgrove,	Hillsgrove,	743	437

SUSQUEHANNA COUNTY.

Ararat,	Ararat,	747	327
Brandt,	Harmony,	746	546
Brooklyn,	Brooklyn,	750	300
Herrick Center,	Herrick,	748	327
Springville,	Springville,	753	550

TIOGA COUNTY.

Antrim,	Duncan,	754	856
Hoytville,	Morris,	754	550
Morris,	Morris,	754	630
Arnot,	Bloss,	759	2,500
Morris Run,	Hamilton,	759	1,500
Cowanesque,	Westfields,	768	371
Sabinsville,	Clymer,	768	684
Gaines,	Gaines,	762	725
Landrus,	Charleston,	760	457
Lectonia,	Deloar,	761	350
Millerton,	Jackson,	758	421

UNION COUNTY.

Allenwood,	Gregg,	773	410
Laurelton,	Hartley,	770	327

VENANGO COUNTY.

Rockygrove,	Sugar Creek,	777	473
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WARREN COUNTY.

Corydon,	Corydon,	788	420
Kinzua,	Kinzua,	788	732
Garland,	Pittsfield,	790	467
Pittsfield,	Pittsfield,	790	467
Gladerun,	Glade,	786	375
Irvine,	Conewango,	786	611
Lander,	Farmington,	786	325
North Warren,	Conewango,	786	503
Russell,	Pine Grove,	786	700
Sheffield,	Sheffield,	787	1,650
Spring Creek,	Spring Creek,	782	300

Village.	Township.	H. O. Dist. No.	Popula- tion.
<i>WASHINGTON COUNTY.</i>			
Avella,	Independence,	805	520
Gastonsville,	Unity,	796	500
Venetia,	Peters,	796	301
Coal Bluff,	Union,	796	526
Hickory,	Mt. Pleasant,	795	550
Westland,	Chartiers,	795	300
Lock No. 4,	Fallowfield,	798	523
Millsboro,	East Bethlehem,	801	650
Florence,	Hanover,	793	333
<i>WAYNE COUNTY.</i>			
Ariel,	Lake,	807	450
Hollisterville,	Salem,	807	375
Lake Ariel,	Lake,	807	450
Equinunk,	Manchester,	810	425
Gouldsboro,	Lehigh,	636	337
Newfoundland,	Dreher,	636	886
Pleasant Mount,	Mt. Pleasant,	808	350
White Mills,	Texas,	803	1,132
Seeleyville,	Texas,	813	524
<i>WESTMORELAND COUNTY.</i>			
Alverton,	E. Huntingdon,	824	636
Baggaley,	Unity,	832	1,350
Blairsville Intersection,	Derry,	832	300
Hostetter,	Unity,	832	820
Loyalhana,	Derry,	832	548
McCance,	Derry,	832	300
Millwood,	Derry,	832	454
Pleasant Unity,	Unity,	832	561
Whitney,	Unity,	832	350
Calmet,	Mt. Pleasant,	824	415
Mammoth,	Mt. Pleasant,	824	988
Ruff's Dale,	East Huntingdon,	824	600
Stauffer,	East Huntingdon,	824	593
Tarrs,	East Huntingdon,	824	600
United,	Mt. Pleasant,	824	463
Claridge,	Penn.,	829	1,200
Delmont,	Salem,	818	650
Fitz Henry,	South Huntingdon,	826	371
Gibsonton,	Rostraver,	827	311
Van Meter,	Rostraver,	827	365
Webster,	Rostraver,	827	710
Herminie,	Sewickley,	828	740
Scott Haven,	Sewickley,	828	525
Shaner,	Sewickley,	828	313
Yohoghany,	Sewickley,	828	313
Larimer,	North Huntingdon,	829	1,305
New Stanton,	Hampfield,	831	320
Salina,	Bell,	817	400
<i>WYOMING COUNTY.</i>			
Mill City,	Falls,	839	415
North Mehoopany,	North Mehoopany,	835	320
Noxen,	Noxen,	833	600
<i>YORK COUNTY.</i>			
Bittersville,	Lower Windsor,	845	400
Craley,	Lower Windsor,	845	400
Yorkana,	Lower Windsor,	845	480
Bridgeton,	Lower Chanceford,	862	372
Brodbecks,	Codorus,	849	300
Codorus,	Codorus,	849	650
Glenville,	Codorus,	849	340
Jacobus,	Springfield,	851	650
New Berrytown,	New Berry,	848	378
Springet,	Springetsbury,	858	363

These villages do not differ materially from the boroughs of like population except in their municipal government. Many of them have public water supplies and lighting systems and their streets and sidewalks are kept up in about the same manner as in the boroughs. The General Inspector would respectfully suggest that, if

the appropriations made by the Legislature for the next two years will justify such additional expenditures, a system of sanitary inspection of villages be inaugurated, and that the Health Officers in the various districts be instructed to make these inspections and report to the Department concerning the care of the water supplies, the methods of disposal of sewage and garbage, sanitary conditions of streets, alleys and surface drains, housing conditions and such other matters as in the opinion of the Commissioner of Health might be necessary or advisable.

Late in the month of December the General Inspector made a preliminary investigation of housing conditions in the eighth ward of the borough of Nanticoke. This ward is detached from the borough proper and formerly known as the village of Hanover. The residents of the ward are largely coal miners in the employ of the D. L. & W. Railroad Company. This investigation was prompted by the result of the medical inspection of schools in this ward which showed about sixty tuberculous children in the schools and others whose condition was suspicious and was made at the request of the school authorities and the Board of Health of Nanticoke. Housing conditions in this ward were found to be in a uniformly congested condition. The buildings are all built about upon the same general plan—two-story frame cottages containing from four to six rooms. Out of 285 single dwellings three of these houses were found to be occupied by three families each, forty-two by two families each and forty-four were occupied by only one family but accommodated boarders or lodgers ranging in number from two to nine in each house. The highest census found in any one dwelling was twenty-seven while many of them ranged from fifteen to twenty. The houses in most instances are owned by some individual living in the house, the D. L. & W. Railroad Company some years ago having opened up a plan of lots which were sold on easy terms to the miners and encouragement given to them to build their own homes. It would appear to the eyes of a layman that this generally congested condition might easily be responsible for the unusual prevalence of tuberculosis in the children of the public schools. The crowded conditions are due largely to the demand for labor in the immediate vicinity at the coalbreakers and the lack of a sufficient number of dwelling houses properly to accommodate those so employed. About forty or fifty additional dwelling houses and a half dozen or so houses especially adapted for lodging and boarding detached men should be provided in this immediate vicinity for the relief of these congested conditions.

During the year the General Inspector was absent from the Harrisburg office on business of the Department 103 days, twenty-two of which were spent in the Philadelphia office assisting in the prepara-

tion of the Department's inventory, Reports to the Dependents Commission, to the Economy and Efficiency Commission, and to the Governor.

During the year the General Inspector traveled 12,704 miles and the expense incident to these inspections amounted to \$637.51.

THE UNDERLYING FACTORS IN THE SPREAD OF TUBERCULOSIS.*

By ALBERT PHILIP FRANCINE, A. M., M. D.

There are two broad phases in the communicability and spread of tuberculosis, which in orderly procedure are best discussed separately, the social and economic side of the problem, and the more strictly medical side.

In placing the responsibility for the spread of infection, we must in the last analysis begin with the individual, rather than the institution. It is, theoretically, more the fault of the people than the fault of their surroundings. It is the fault of the people who make the homes. This great plague lives and flourishes in the homes of the ignorant, amid poverty and squalor; but, as has been well said, it is not alone the buildings which make the slums, but the people who live in them. Of course, bad housing conditions play a profound rôle in the endemicity of tuberculosis, but even could we give every family an airy, clean house, so long as there were ignorance, carelessness, filth, dissipation, and alcoholism we would still have slums, infected houses, and tuberculosis.

It is perfectly apparent, that better housing conditions would be an enormous stimulus to better living and better home management; and, therefore, while the first remedial step is education and uplifting among the poor and ignorant themselves, the second corollary need which is of equally pressing importance is to improve physical conditions of living, improve housing conditions. The problem of proper housing conditions for wage earners and others of small income is of vital importance to every community and the baneful effects of basement housing and overcrowding are in no way more apparent than in the spread of infections of all sorts, particularly of tuberculosis, and the entire physical and moral health of a community is adversely affected by bad housing conditions. Next in importance in

*Read before the College of Physicians of Philadelphia, March 4, 1914.

this relation, comes the subject of conditions of labor or occupation. For, aside from family ways of living and bad places to live in, there are many vile conditions of labor which reduce the health and weaken the resistance of the individual, making him susceptible to infection and making him and his descendants less and less likely and able to bring into the world and rear healthy, robust children.

In mentioning conditions of labor, however, as an important element in the prevalence of tuberculosis, we must think clearly and understand that the many bad conditions which exist are largely predisposing factors only, and their true significance relates to the demoralization of the health, morals, and social status of the individual; and to home conditions from inadequate wages. Because the morbidity from tuberculosis is high among a certain class of wage earners, we must not jump to the conclusion that kind of work specifically "causes" tuberculosis. What it really does is to reduce the general health and resistance of the individual, and if such workers have the seed of tuberculosis in their bodies, as is often the case, undue fatigue, confinement, low wages, give rise to the physical conditions necessary for the flourishing of the seed. There is no specificity of labor as a "cause" for tuberculosis. It is an enormous factor, but never a cause (eliminating infected workshops). It comes the nearest to being a cause where certain forms of dust are constantly inhaled, which act (in one way at least) by reducing the tone and resistance of the lungs themselves, and so predispose to the pulmonary localization and activity of already existing infection, or of a fresh infection.

For ethical and hygienic reasons the common drinking-cup must go, but tuberculosis is the least likely of the infections (so far as adults are concerned) to be engendered in this way. Whether this should be made to include the common Communion cup may be answered, perhaps, in the affirmative on account of the danger of certain infections, but so far as the spread of tuberculosis is concerned, this is a negligible factor.

It is thus recognized that the problem of tuberculosis is in a large sense a social and economic one. With such factors to contend with, having their roots deep down in the very basis of modern life and condition, affecting millions of people, is it not right that we should at least pause to appreciate the vastness of our undertaking, and from its very vastness should we not draw resolve to pursue our aim indomitably and to be patient in demanding too immediate results, though it should be stated in passing that results are becoming strikingly apparent.

Thus let us neither forget nor be dismayed by the fact that our problem is to combat, one might almost say, the drift of the times, to raise through education, sanitary laws, medical hygiene, and philan-

thropic effort the proletariat from their condition of dense ignorance and poverty, to enable them to get suitable homes and teach them how to live in and manage them, and to improve the conditions of their labor—that there may be cleanliness and light, suitable care of the children, sufficient food and clothing, necessary hours of rest, provident and good habits and self restraint; and available medical supervision. But having said this much, we have not said all, for we must do this same Augean task for the thousands of immigrants arriving hourly from Europe to swell the ranks of this great army of ignorance and poverty.

But there is one great satisfaction to be taken in the very breadth and vastness of this phase of the problem, namely, that it is not merely tuberculosis work, but public health work in whatever form of activity this shows itself. Antituberculosis work, and all forms of public health work in general, bear an increasingly apparent interdependence. It is not alone strictly antituberculosis measures which may be confidently looked to for results, but all the associated movements for the public welfare in health, morals, and conditions, which are essentially allies. This is now fully recognized and with the well organized tuberculosis crusade pointing the way, other movements have followed along similar lines and the crusade of enlightenment and prevention of disease is becoming more and more a unit in its methods, aims, and interrelationships.

It is necessary next to consider certain salient features of the disease itself, bearing on the question of the spread of infection. Two great factors in its communicability stand out.

Infection takes place from close personal association or contact with open tuberculosis, as by living with a consumptive or from living in a room or house contaminated by a consumptive. The great source of the infection lies in the carelessness of the individual consumptive in contaminating his surroundings, by spitting about or not properly disposing of his sputum; or by spray infection from coughing (equally dangerous) without guarding the mouth with a paper napkin. His towels, bedding, table utensils, etc., are also a source of infection. The period at which a consumptive is most dangerous covers, of course, the second and third stages of his disease when the lung is breaking down and the sputum contains large numbers of living tubercle bacilli.

The age at which infection is most likely to take place is childhood. It should be borne in mind that adults, particularly healthy adults, have a very considerable resistance or immunity to tuberculous infection. Without discussing the question of the sources of this relative immunity, it may be stated as a fact that it requires a prolonged exposure and implantation to give rise to pulmonary tuberculosis in

an ordinary healthy man or woman. In proportion as bad surroundings, faulty personal hygiene, bad conditions of labor, other infections, dissipation, etc., play a part in the life of the individual, by just so much is this natural or acquired immunity impaired or even broken. But the fact remains that the chance inhalation of tubercle bacilli as they may float in the dust of the street, or in public meeting places, or the occupancy for a night or two of an infected room or sleeping berth, could hardly give rise to pulmonary tuberculosis in an adult.

This must not be misinterpreted as in any sense condoning infected dust or infected places. No inference can be drawn from this that spitting in public places, street cars, or on the sidewalks should be tolerated. On ethical grounds and because of the dangers of catarrhal infections, spitting should be (and is in many communities) a misdemeanor punishable by law. The danger of infection of children by such conditions is a very possible one.

For the time at which this natural resistance is weakest is in childhood, and for this reason and because of intimate and prolonged contact with open tuberculosis in their homes, children furnish the great soil for implantation. For physiological reasons, which would lead us too far afield to discuss, this infection during childhood does not as a rule develop into pulmonary tuberculosis at that time, but lies dormant in the lymphatic system or is latent until adult life, when it breaks forth or manifests itself in pulmonary localization. It is largely children infected by contact in their homes who furnish later the ever on-coming crop of consumptives.

Milk and meat from tuberculous animals also constitute a source of infection. Infection from cow's milk has been variously estimated as being responsible for from one to ten per cent. of cases in infants. Infection may also be hereditary, the direct transmission of the tubercle bacillus taking place from mother to the fetus by placental circulation. This has been shown to occur in mothers with advanced pulmonary or military tuberculosis, but has recently been shown as also possible where the lesion in the mother is in the incipient stage or even latent or non-active at the time of the birth (Warthin).

During childhood and early adolescence this early tuberculous infection, glandular in type, may not manifest itself at all, or only in anæmia, underdevelopment, etc., these children being generally below par physically and delicate. These children react to tuberculin and often have enlarged lymphatic glands, but there is no other way in the majority of instances of telling that they are tuberculous. But this is quite sufficient for the diagnosis, which is to be understood to mean that the moment a child reacts to tuberculin, it is conclusive evidence that it has been sensitized by the tubercle bacillus

and that the moment a child is thus tuberculized it becomes potentially at least a future case of pulmonary tuberculosis.

Not only the general trend of expert opinion bears out the above view in relation to time of infection, but there are many clinical and pathological statistical data to confirm it. The results of the tuberculin test, which when properly performed and repeated is recognized as being specific, in large groups of children in hospital practice, as reported by von Pirquet, Calmette, Hamburger, Frantz, and others in widely different cities, warrants the statement that most children of the working class, are sensitized by the time they reach fourteen or fifteen years of age. All authorities admit that at least seventy-five per cent. of the population will react to tuberculin. From post-mortem findings, evidence has been clearly accumulating as to the frequency with which the disease is found at necropsy among the poorer classes; and, with increased refinement in postmortem work, the percentages are getting significantly greater. Nägeli reported definite signs of tuberculosis in ninety-seven per cent. of all bodies examined consecutively. Hamburger, in a large group of children, reported postmortem findings of sixty-three per cent. with tuberculous lesions between the ages of seven and ten years and ninety-five per cent. in those between eleven and fourteen years of age. Ghon's post-mortem statistics from St. Elizabeth's Hospital in Vienna show that by the end of the third year six to eight per cent. are infected, the percentages rapidly rising until by the fourteenth year the infection reaches ninety-two per cent. It goes without saying that by no means all these cases would have developed pulmonary tuberculosis clinically had they lived; indeed, this early infection is by many looked upon as a source of immunity to subsequent reinfection, but such statistics furnish valuable evidence of the time when primary infection takes place.

There arises here an interesting paradox, for while we know that infection with tubercle bacilli is so largely universal in childhood among the poorer classes in our cities, yet we also know that the death-rate from tuberculosis among urban populations has been steadily decreasing. To what is this due? Is it due to strictly antituberculosis measures, in association with preventive and curative measures against disease in general; is it due to institutional care and improved conditions of living? Or is it due to some deeper cause, a development of increased resistance, specific immunity or allergy (von Pirquet) in urban populations themselves? Recent discussion has concerned itself very much with this phenomenon, and authoritative opinions differ.

Thus Newsholme points out that while the death-rate from tuberculosis is nearly always greater in urban than in rural districts, the countries showing the most urbanization have secured the greatest

reduction in, and the lowest death-rate from tuberculosis. The conclusion that he draws from this fact is that the death-rate from tuberculosis has declined to the greatest extent in those countries in which the ratio of institutional to domestic relief has been highest. A consideration of all the facts, he says, justifies the conclusion that the substitution of institutional for domestic relief for the consumptive poor has been historically the main factor in the reduction of this death-rate, and in a later paper he repeats that had it not been for the steadily increasing extent of institutional treatment of the sick, and especially of the consumptive sick, which has characterized most of our great centres of population, we should have experienced not the decline of tuberculosis which has occurred, but a great increase in its prevalence. With this view I am in entire accord. Hermann Biggs says "in the judgment of those who have most experience in the study of the problem, no other measure for the prevention of infection compares in importance to the treatment of advanced cases in hospitals and sanatoria."

On the other hand no less a distinguished investigator than Karl Pearson has suggested that the selective process of many years of heavy mortality from tuberculosis has left us with a more immune and resistant population. He would have us change our views as to the value of hospitals and sanatoria in the prevention of tuberculosis, and devote all our efforts to raising the resistance of the individual and the race. In brief, he denies the value of our general campaign, says that we are all tuberculized, and that the only efficient source of prevention lies in developing this communal or race immunity, which is largely a matter of environment and heredity. T. D. Lister goes so far along these lines as to say that were it for a moment to be granted that it is possible to control the spread of tuberculosis by preventive measures, then the service rendered to urban populations would be dangerous instead of beneficial, because the development of what he considers the only important factor, namely, increased communal resistance, would be ignored; and he further adds, that in his opinion the adult death-rate from tuberculosis may be taken as a measure of the loss of resistance to latent tuberculosis acquired in childhood.

A phase of this latter view is seen in much recent literature based on the studies of Roemer, Hamburger, von Pirquet, Baldwin, and others, which has been recently emphasized by the last-named investigator, who believes that a primary infection in childhood is of value as a protection against subsequent reinfection by the production of a specific allergy or changed condition. This corresponds, of course, to what we know in regard to the increased resistance to reinfection in experimental animals from a primary inoculation.

As an illustration of this view, may be cited his belief that the development of a strong allergy is at least one reason why miliary tuberculosis is not more frequent during relapses and extensions of pulmonary tuberculosis, particularly since we know that the bacilli themselves are often free in the blood-stream. Applying this, he feels that most adult tuberculosis is not due to a new infection or reinfection from contact, because the allergy of a childhood infection, so universally present, has protected against this, but that most adult tuberculosis is due to a lighting up of the disease from the spread of autogenous superinfection brought about by extraneous conditions of environment. Thus he argues that adults are very little endangered by close contact with open tuberculosis and not at all in ordinary association—childhood is the time of infection, youth the time of superinfection, and that from extension of the primary disease. With which view, except as it might imply a relaxation of any of our usual precautionary measures against the possibility of infection among adults by contact, I am largely in accord as stated above. Such theories inevitably lead back to the fundamental principle of eugenics, which lie not strictly in the survival of the fittest, not strictly in an attempt to rear a race of men and women whose resistance is attuned to living and surviving in a germ-laden world and who are capable of withstanding an utterly vile and vicious environment; but rather in forming a pure, healthy, and happy environment, in making the world a fit place for all to live in, and then in producing the best and ablest race both physically and mentally to inhabit that purified environment (Moore).

Certain phases of the views quoted above appear radical and perhaps unwise general teaching (see Pearson), but whatever the element of error or of truth, and the truth probably involves a middle course, these views have at least served the purpose of calling the attention of those interested in the crusade to this very important element of racial and communal resistance whether natural or acquired by early infection, which we have perhaps been inclined to overlook and neglect; and the practical necessity for directing every effort by good food, rest, and recreation, by airy schools, playgrounds, inspection and supervision, to raising this quality of resistance, particularly in childhood and early adult life.

It may be stated as a fact that tuberculosis is the most common infection of childhood, and, as well pointed out by Philip, we must get rid of the artificial distinction between so-called medical and surgical tuberculosis. From the scientific standpoint, the most slender seedling of tuberculosis is potentially significant. It is impossible to say which tuberculous seed will be cast off and which will mature. Inoculation may occur through the mucous membrane of the gastrointestinal or respiratory tract, or the skin, and whether it will spread

from the lymphatic system, which is the first site of this early infection, and develop into pulmonary tuberculosis later, depends largely on the child's vitality, and resisting powers through its living tissue cells, and upon its environment. In other words, this quality of natural or acquired immunity may hold the infection dormant; may heal an active lesion in its incipiency, or localize it in the glands or bones; or may give way with resulting meningeal, miliary, or pulmonary involvement. The course of events which supervenes, is dependent largely on extraneous circumstances, on the amount and character of the tuberculous infection, on the number and character of the acute infections to which the individual is exposed; on enforced environment and to a considerable extent on inherited qualities. Philip says:

"The problem can only be solved effectively by a better understanding of the physiological needs of developing life and a corresponding renovation of the nurseries and school-rooms of the nation. It is folly to dream of transferring all tuberculous children to preventoria or sanatoria. This plan is to plead ignorance of the essential needs of the problem. The home of the poor man must be made the nursery of healthy children and cease to be the breeding ground of tubercle-tainted wastrels. Each recreated home is an effective preventorium against tuberculosis."

It will thus be seen that the problem of prevention to be effective, even as limited to the medical aspect of the communicability of tuberculosis, must not only take into account the care and isolation of the consumptive himself, but also the care and development of the children who have already been infected or who may be exposed to infection, and probably the development of a specific racial immunity. But when we consider as essentially one, as we must do, the two broad phases of the problem, which I have attempted to outline above, namely, the social and economic conditions, and the more strictly medical conditions responsible for the prevalence and spread of tuberculosis, the point previously emphasized is brought forcibly upon us—how very apparent is the interdependence to-day of the tuberculosis campaign and all efforts looking to the common welfare! Let me repeat, that it is not alone from the strictly anti-tuberculosis campaign that we may confidently expect to control tuberculosis, but from all allied movements looking to improvement of the health, morals, or condition of the people. Folks says "If our task is the more difficult because it is bound up with every phase of modern civilization, it is equally true that every substantial advance in other lines assists our cause."

For instance it has been pretty conclusively shown (Reincke) that wherever the death-rate from typhoid fever is reduced, through the introduction of pure water, numerically by one; there is a simul-

taneous reduction in the general death-rate of from two to three. What is true in this case, is equally or even more strikingly so in relation to other infections. Think of the vista of accomplishment which opens up before us, when we know, as we do know, that more than eighty per cent. of all deaths are due to preventable causes!

Thus it is apparent that the movements against infant mortality, venereal diseases, alcoholism, the infectious fevers, cancer, procreation of mental defectives; and the correlated campaigns for better housing conditions, better hours and conditions of labor, child welfare work, etc.; all these movements, public or private, of whatever scope and by whatever methods they proceed, are all working to a common end, the welfare of the race, and as such are prototypes and allies of each other and of the greatest of them all, the tuberculosis campaign. They are all campaigns of preventive medicine, based on scientific development, and attempting, largely by education, to carry the message of health and right living into the homes and very hearts of all the people.

THE DEVELOPMENT OF THE TUBERCULOSIS CAMPAIGN IN PENNSYLVANIA, WITH A DISCUSSION OF ITS PRINCIPLES.*

By ALBERT PHILIP FRANCINE, A. M., M. D.

The development of the anti-tuberculosis movement in Pennsylvania began in Philadelphia in the decade following the discovery of the tubercle bacillus in 1882, and may be considered to have passed through three successive phases or stages. The first consisted in pioneer effort to arouse the public and the profession itself to a sense of the importance and extent of this great scourge, its economic position as a destroyer of human life, its relation to domestic and community assets, and the possibility of its eventual control. That epoch-making discovery furnished a scientific basis upon which to proceed, and gave the needed impetus to the propaganda of education which in the two succeeding decades laid the foundation and largely made possible the second stage of the tuberculosis movement, *i. e.*, that of the establishment of institutions for the treatment of tuberculosis by public philanthropy.

*Read before the College of Physicians of Philadelphia, June 3, 1914.

In response then to this preaching of tuberculosis in season and out of season a few scattered and disassociated institutions due to private philanthropic effort made their appearance, too few in number and too limited in scope to be in any sense effective in handling the tuberculous sick of the commonwealth, but promising as an indication of aroused public interest. These institutions were free or partly free, but were maintained in some instances with the assistance of State money both for new buildings and running expenses. The majority of them were established in or about Philadelphia, as will be seen from the appended list of institutions or associations dealing with tuberculosis prior to the year 1907, when the State Department of Health took up this work, inaugurating the third stage of the movement, *i. e.*, that of the official campaign.

The first permanent institution* was the Protestant Episcopal City Mission in Philadelphia, which began caring for a few advanced consumptives as early as 1876, but only became an important factor in the crusade in 1886 when it opened the Home for Consumptives at Chestnut Hill. At the earlier date a few rooms were fitted up in the Mission House, the House of Mercy, at 411 Pine Street, for temporary hospital purposes. Where practicable, however, consumptives were cared for in their own homes, the mission securing for them medical attendance, clothing, food from its diet kitchen, and often paying a member of the patient's household to stay home and nurse the patient. It also began sending a few cases to the convalescent retreat at Glen Mills in 1884. This, however, was given up upon the opening of the Home for Consumptives at Chestnut Hill.

The next institution made its appearance fifteen years later, namely, the Rush Hospital for Consumptives in Philadelphia, which opened its dispensary in June, 1891, and its wards in January, 1892, and a Country Branch at Malvern, Pennsylvania, in June, 1892. It moved to its present handsome building at Thirty-second and Lancaster Avenue in January, 1895. The Free Hospital for Poor Consumptives and White Haven Sanatorium Association was organized in Philadelphia in 1895. From 1895 to 1903 it cared for a limited number of advanced consumptives by placing them in the wards of general hospitals at a weekly rate of five dollars, but gave up this work in 1903, having in 1901 opened the White Haven Sanatorium for early cases at White Haven, Pennsylvania. In 1913 it again took up the care of advanced cases of tuberculosis in the Department for Diseases of the Chest, of the Jefferson Hospital, where it contributes to the support of free beds. In 1908 the Department of Tuberculosis of the Philadelphia General Hospital was opened, to

*The Church Dispensary of Southwark, a small dispensary caring for tuberculosis sufferers, was opened in 1873, and it may be looked upon as the precursor of the interest of the Protestant Episcopal City Mission in tuberculosis. Its work, however, soon became merged in that of the City Mission.

care for the city's indigent consumptives. In 1900 the Lucien Moss Home of the Jewish Hospital, Philadelphia, was established, a free service for consumptives of the Jewish faith. 1903 saw the establishment in Philadelphia of an important and far-reaching institution for the study, treatment, and prevention of tuberculosis, the Henry Phipps Institute at Third and Pine Streets. This institution became a department of the University of Pennsylvania in 1910 and formally opened its splendid new hospital at Seventh and Lombard Streets, in May, 1913.

The first institutions outside of Philadelphia were the Small Camp for Consumptives on South Mountain, opened by the State Department of Forestry in 1903, and the West Mountain Sanatorium at Scranton in the same year, followed by the Grandview Sanatorium at Oil City in 1904. Previous to 1906 Pittsburgh had absolutely no provision for its tuberculous sick, but in that year were established the Tuberculosis League of Pittsburgh and the Pittsburgh City Home and Hospital. The Wilkes-Barre Tuberculosis Dispensary was opened in 1906 and was taken over in 1907 by the State Department of Health, and became the first of the chain of State Tuberculosis Dispensaries.

Other antituberculosis associations, whose activities were principally educational in character, were organized previous to 1907, as follows: The Pennsylvania Society for the Prevention of Tuberculosis, in Philadelphia, in 1892; the Scranton Society for the Prevention and Cure of Tuberculosis, in 1903; the Antituberculosis Society of Harrisburg and vicinity, in 1905; the Wyoming Valley Society for the Prevention and Treatment of Tuberculosis, in 1906.

The above includes all the free or public institutions caring for cases of indigent consumptives in Pennsylvania prior to 1907. In a number of them a minimum charge was made, though there were some free beds in all. Throughout the rest of the cities and towns of the State and in the rural districts there was no provision whatever for the free treatment of consumptives. Thus the total provision for the State consisted in 1907 of 687 Hospital beds,* free or partly free (of which 522 were in Philadelphia); 319 Sanatorium beds,** and 7 Tuberculosis Dispensaries, 5 in Philadelphia, 1 in Pittsburgh, and 1 in Wilkes-Barre. There died from tuberculosis in Pennsylvania in 1907, 10,825 persons.

It is perfectly apparent how inadequate this armamentarium was against a disease so widespread and so largely confined to the poorer classes, pitifully inadequate not only in regard to treatment of the sick themselves, but in relation to the effective work of prevention

*In Philadelphia: Home for Consumptives at Chestnut Hill, 70; Rush Hospital, 40; Blockley, 320; Lucien Moss Home, 40; Phipps Institute, 52. In Pittsburgh: Tuberculosis League, 70; City Home and Hospital, 35.

**White Haven, 200 of which 100 were free; Rush County Branch, 40; South Mountain Camp, 20; West Mountain Sanatorium (Scranton), 24; Grandview Sanatorium (Oil City), 35.

by segregation and education in the homes of the poor. It may properly be noted also that it had taken twenty years of the hardest kind of individual effort to get this much—not a very promising outlook for the future at that time.

It was thus not a theory but a distressing fact which confronted the State Department of Health created in 1905 under a law drawn up by Dr. Charles B. Penrose, literally tens of thousands of indigent consumptives uncared for and without the facilities existing to care for them, and correspondingly little real effective work along the broader lines of prevention. The situation was so pressing that when the General Assembly met in 1907 the Commissioner of Health had a big practical question to solve, which under the law he was called upon to solve, not to theorize and temporize about, but to show how suitable measures for prevention and treatment of this great army of consumptives could be supplied most economically, most efficiently, and most expeditiously. The brilliant and original answer came at once—a free tuberculosis dispensary was opened in every county of the State, in the more populous centres more than one, and in a short time there were a hundred and fourteen State dispensaries so distributed that there could not exist in any corner of the State, however remote, an indigent consumptive who could not receive near at hand free medical supervision for himself and family of the highest standard. One large State sanatorium was at once opened and two others planned, one of which has been open for several years and the other is about to be opened. *The efficiency of this system lies in the close relationship between dispensary and sanatorium, so that every indigent consumptive in the State and his family can not only secure treatment at home and in the home, but sanatorium treatment as well; and what is quite as important, is followed up and kept under observation or treatment upon his discharge from the sanatorium.*

Within five years the State had treated over 75,000 patients in its dispensaries, housed over 10,000 patients in its sanatoria, and through its trained nurses paid over 600,000 visits to the homes of its patients. The educational and preventive effect of this system alone is simply amazing.

But there were not wanting critics of this system, and to paraphrase an idea in one of the admirable historical papers of Sidney George Fisher, the eloquence of the minority was raised in opposition. It is one thing to be eloquent in your idealism and advocate a theory when you are not responsible for results, and quite another to act for practical ends when you are in power. I want to discuss Pennsylvania's official system with you not only as to its absolute

merits but specifically in relation to conditions existing in Pennsylvania (which I have already outlined) at the time the State took up this work.

The gist of this criticism, which is by no means constructive, is about as follows: it would have been better for the State to have continued to foster by State money both for new buildings and maintenance the few private institutions which were struggling so bravely to carry their unequal burden. It would have been better to encourage the principle of local care, through the establishment by counties or groups of counties, of many small local sanatoria, because it would appear that it was the duty of local communities to care for their own tuberculous sick, and because consumptives would prefer to go to local institutions, where they could be near home and see their relatives and friends. Parenthetically, so far as Pennsylvania is concerned, I may say that I believe this to be a fallacy on every count; except in so far as it applies to far-advanced consumptives, that is, those so sick as to be unsuitable for strictly sanatorium care. It is manifestly the duty of local communities who can afford to do so to provide local hospital care for this group of cases.

STATE AID FOR PRIVATE INSTITUTIONS.

1. The principle of the State's granting large subsidies to private institutions for new buildings that they may extend their work, and then being called upon in addition for large subsidies for maintenance that they may keep up this work, needs no discussion here. Besides, it must be plain to everybody, (*a*) that under no conditions could private institutions have cared for the tuberculous sick of the Commonwealth, and (*b*) that once the State undertook to do this work itself on a gigantic scale it could not dissipate its resources in this way. It was seen that the tuberculosis problem was not a matter for public philanthropy but of public business, as much a part of the State's business as any other great work for the welfare and advancement of its citizens. Private philanthropy could do much to help, but it could not furnish the means, facilities, workers, or corelationship needed in this field. The State was glad of the existence of such admirable institutions (few in number as they were), and welcomed most heartily their cooperation and assistance, but it could no longer continue largely to build and support them, in those instances where this was the case.

DIFFICULTY OF GETTING LOCAL COMMUNITIES TO ACT.

2. Next as to the possibility of getting *local communities*, particularly the counties, to act; and let us keep in mind the pressing need there was for definite effective action. It has been pretty con-

clusively demonstrated that as a rule communities, whether they be counties or towns, have neither the means nor the awakened interest which will lead them to build and maintain even with State aid local sanatoria. In certain States, in order to encourage this plan, a *per capita* grant, usually five dollars a week for each patient in such institutions, is allowed by the Legislature. The law has usually been mandatory, and yet there has been little response and the situation has drifted on unrelieved. It has been freely acknowledged, by those interested in this plan in some other States, that this kind of legislation accomplishes little; the pressure for local institutions must come from within the community itself. Let us see how this plan applies to dispensaries. A law in Massachusetts of 1911 made it mandatory on every local community of 10,000 or over to open a local tuberculosis dispensary, but there have been very few so established as a result of this law. The secretary of the Trustees of Massachusetts' Hospitals for Consumptives has publicly stated that this kind of legislation is a failure. How much more effective is Pennsylvania's centralized system, where at the fiat of one man and his Advisory Board a hundred and fourteen dispensaries were opened in every section of the State.

A special committee of the Massachusetts Legislature appointed to investigate the best means and methods to check the spread of tuberculosis has, after a year's deliberation and consultation with the best experts in the country, recently made among others the following recommendations: "1. The need of a central authority to supervise the control of tuberculosis is apparent, and has been pointed out by commission after commission. This Committee recommends a single-headed Department.* * * *

"5. So many communities complained to this committee of financial inability to build tuberculosis hospitals that it is recommended that the debt limit be extended for this purpose so that the hospital law on the statute books may be complied with.

"6. The State Board of Health should be given power * * * * to provide a State-wide system of visiting nurses."

Certainly the first and last recommendations look as if Massachusetts were anxious to take a leaf from Pennsylvania's system, and the other recommendation endorses my contention of the financial inability of counties to build hospitals and the futility of attempting by statute to compel them to do so.

New Jersey passed a law in 1910 granting counties or groups of counties the right to establish local sanatoria, and this was made mandatory in 1912; but as a result of that law there have been (I am credibly informed) just two county institutions opened with a combined accommodation of forty beds. How much better, because

more economical and effective, is a system that gives us a thousand sanatorium beds in a few years and two thousand within seven years.

It is only fair to say that the State of New York has proceeded largely on the principle of local care and with much success, and it is no doubt due to this fact that this system has been so widely exploited. New York has been able to get the local communities to respond—but money seems to be easier to obtain in New York and the people seem to move more quickly. At any rate the fact remains that New York City has 4,500 beds for tuberculosis (1914) as against 589 in Philadelphia*—a far greater number proportionately to its population than Philadelphia. In strictly sanatorium beds the State is not proportionately better off than Pennsylvania, though in addition to the State Sanatorium at Ray Brook, twenty counties in New York State have erected or planned to erect local tuberculosis hospitals.

LARGE INSTITUTIONS MORE ECONOMICAL AND EFFICIENT.

3. There is also the question of economy to be considered. It is perfectly apparent that it is more economical to build and administer a sanatorium of 1,000 beds than five sanatoria of 200 beds each. This view is generally accepted or at least must be gaining ground, as witness the new Sea View Sanatorium on Staten Island of the New York City Department of Charities just opened with 1,000 beds. Otisville, the Sanatorium of the New York City Department of Health, has 600 beds and plans are on foot, I am told, to increase this to 1,000.‡

The plan of the Department of Health of Pennsylvania has been to build a few large institutions rather than many small institutions, because the larger institutions are more economical and can give the patients greater advantages than small sanatoriums can afford. "At Mont Alto Sanatorium, where at present we have 1,058 beds, the *per capita* cost is but \$1.15 per day, which figure will likely be reduced. Taking the other charitable institutions in the State handling tuberculosis and figuring out their cost for all classes of patients handled it is more than \$1.65 per day. * * * * You will readily see an economy on two thousand beds between \$1.15 and \$1.65 of just fifty cents a day, or the saving to the State of an even thousand dollars a day. The department's view is that it is wiser to build each sanatorium of sufficient size to reach the maximum economy in management and to save the available funds for other lines of tuberculosis work rather than to fritter away State funds in a large

*Blockley, 320; Chestnut Hill, 70; Rush Hospital, 80; Phipps Institute, 24; Jefferson Tuberculosis Department, 40; Lucretia Moss Home, 40; Tuberculosis Ward of Episcopal Hospital, 15.

‡Plans are on foot to increase the accommodation at Blockley by 50 beds.

series of small institutions at a much greater cost for maintenance. A thousand dollars a day means \$365,000 a year, more than \$700,000 for a period of two years. (Royer)."

Further, the segregation and care of these cases can be as well accomplished from a public health point of view, in the larger as in the smaller institutions; and even a good deal better if the smaller institutions are continually cramped for means, as is apt to be the case with county institutions.

STANDARD OF MANAGEMENT HIGHER IN STATE INSTITUTIONS.

4. It is presumable that the standard of excellence would vary, nay, must vary in a number of smaller institutions under separate and different management. It is self-evident that under the county commissioners, or whatever the local boards of management may be, the interest and efficiency of the boards would vary in different localities, either for political or other reasons. It does not stretch the imagination unduly as to where to look for and expect the best standard of management, in a local board with individual responsibility merged in a group management, or from one man, a State official, directly and personally responsible to the public, for a public institution in which the whole public is interested and concerned and for which he gets the entire credit or the blame. This point of difference in efficiency of the management of different local hospitals for the care of consumptives has been investigated with results strikingly confirmative of what I say by a committee of the National Association for the Study and Prevention of Tuberculosis. This committee shows that in a relatively large number of the institutions investigated (twenty-five in all), no sputum or urine analyses were made; no re-examinations of the patients were ever made; no record of the patient's first examination was kept; no records of temperature nor nurses' records were kept and when kept were incomplete; no record of weight was made except when the patients weighed themselves. In seventeen institutions there were no patients receiving open-air treatment at the time of the inspection. In eleven institutions there were no rules observed in regard to keeping the windows open day and night, and the matter was left more or less to the discretion of the patients, and at the time of the visit the windows of the wards and rooms were tightly closed, etc.

CONSUMPTIVES PREFER TO GO TO DISTANT INSTITUTIONS.

5. Do indigent consumptives object to going to a sanatorium at a distance? Let me answer this from an experience of eight years in the largest tuberculosis dispensary in Philadelphia. They do not; they prefer it. Nearly every consumptive has a desire to

“go away” for a cure. It is easier to get them to go to a sanatorium at a distance than to one near at hand. This is psychologically a natural view-point, and I have not uncommonly seen patients (in some instances really unsuitable to send away) refuse to go to an institution nearby, who were quite willing and anxious to go to Mont Alto or Cresson, where the change of climate and mountain environment appealed to their hope of a new grasp on health. Further, it is difficult to sever local county institutions from connection with pauper institutions and with poor board officials. This again interferes with the willingness of many to go to such institutions.

PATIENTS BETTER CONTENTED AND STAY LONGER AT DISTANT INSTITUTIONS.

6. Patients who go to sanatorium at a considerable distance from their homes seem better contented and do remain longer than those in institutions near home. We find that at Mont Alto patients stay in direct relation to the distance from which they come. Those who live farthest away stay the longest. This we have shown to be, as a rule, geometrically true; and as an illustration, in a series of one year's cases, 418 in all (investigated by me), who went to Mont Alto from Philadelphia the average length of stay was seven and a half months, while the average length of stay of all cases for the same year was four and a half months. So striking is this that the medical director of Cresson Sanatorium, who has investigated it for his institution, and who finds it equally true, has suggested that patients would stay longer and even better results be obtained if Mont Alto took the cases from the western part of the State and Cresson those from the eastern part of the State.

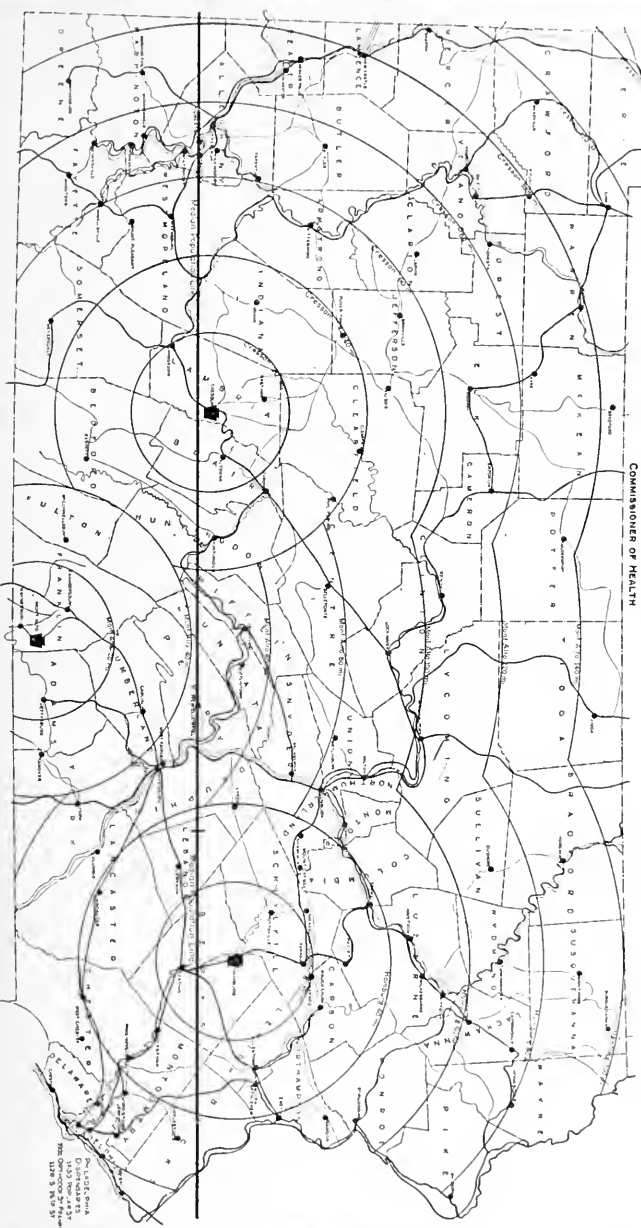
The above I think are convincing practical arguments against the efficiency of small local sanatoria, even granting for the sake of argument, that this system ever really would have amounted to anything or could have supplied the immediate need of Pennsylvania. It never could possibly have done so, for in Pennsylvania the counties are too poor. Had Pennsylvania attempted to handle the problem in this disassociated and incomplete manner we could not have had in twenty-five or in fifty years the facilities we have today; and, indeed, we could never have developed the cohesive, interrelated, and effective system in the close relationship between dispensary and sanatorium that we have to-day.

THE ADVANCED TOXIC CASE SHOULD BE CARED FOR LOCALLY.

7. There is just one phase of the problem where the principle of local care does hold good for self-evident and practical reasons. Everybody admits and desires that local communities should pro-

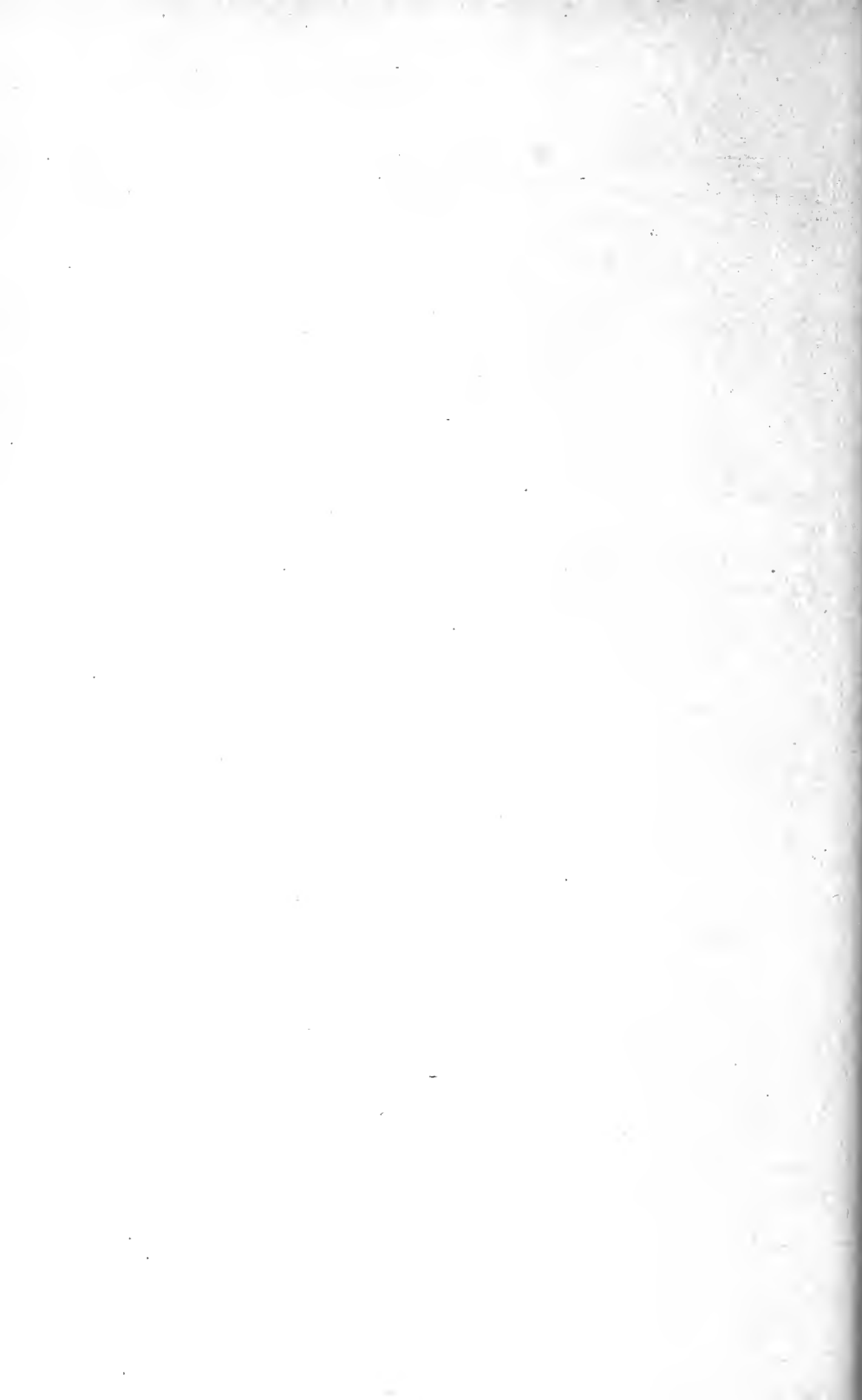
COMMONWEALTH of PENNSYLVANIA
 DEPARTMENT OF HEALTH
 DIVISION OF TUBERCULOSIS DISPENSARIES
 MAP SHOWING LOCATIONS OF
 TUBERCULOSIS DISPENSARIES & SANATORIA
 JANUARY 1914

SAMUEL G. DIXON MD
 COMMISSIONER OF HEALTH



Published by
 the State Printer

Noted Data
 Dispensaries
 Sanatoria
 1178 3 1914 57



vide accommodation for their far-advanced toxic consumptives, for those cases that are not suitable for strictly sanatorium care. More than fifty per cent. of the cases sent to the State Sanatoria are far-advanced cases, many of them only suitable for infirmary care. The State sanatoria must provide accommodation for these cases, because there is, speaking broadly, no other accommodation for them, but it should not have to take care of this class of cases. Certainly the larger centres of population should have suitable hospitals for these cases, but even they cannot be got to supply these. The pressure for such hospitals must come from within, legislative enactment accomplishes little, and there is ample authority under the law for such communities to build these institutions, and it is devoutly to be hoped that they will see their duty and do so. It is not fair to send dying consumptives to Mont Alto and Cresson, and yet there is no other place to send most of them, and many insist on going. The State stands ready to care for all classes of cases in its sanatoria, because there do not exist adequate facilities for the care of the advanced toxic case at home, where it belongs. I wish particularly to emphasize the distinction I make between local hospitals and local sanatoria. I do not believe that counties or groups of counties should be called upon to build local sanatoria, even in theory; and practically the counties are much too poor in Pennsylvania ever to attempt to do so. Many of them have not even got almshouses and cannot take care of their indigent poor; many of them have no general and no isolation hospital for their contagious diseases and are too poor to provide these. The counties outside the few larger centres of population are very poor, they have practically no money for public improvements or for purposes of philanthropy. They cannot even supply themselves with pure water, it is quixotic to ask them to take care of their tuberculous sick. But I do believe that the richer and more populous centres, say all cities of 50,000 or over, could and should provide special tuberculosis hospitals (or special wards in general hospitals if the hospitals can be prevailed on to agree to this) for the local care of their toxic advanced consumptives. But even these larger and richer centres will not provide this evident and pressing need; witness Philadelphia and Pittsburgh. It is for this reason that the State must stand ready to take care of all classes of consumptives, and it should do so until local provision of the kind indicated is made—very much on the same principle and for the same reasons that it should take care of the insane, because local communities cannot afford to bear the great burden of this expense, and yet numerically the insane are insignificant as compared with the tuberculous.

To sum up, I have shown that previous to 1907 facilities in Pennsylvania for getting close to the people both by way of education and treatment of the sick were wholly inadequate, and further lacked interrelationship or cohesiveness. There were a few individuals working manfully for the advancement of the cause, but they were handicapped by lack of means and official power, misconstruction of motives, and too often by working at cross-purposes. The antituberculosis movement had not yet found itself; it was not on a scientific basis. To express it somewhat fancifully it had begun by the preaching of a holy war, which had been followed by a disorganized crusade; and this in turn was finally followed by the strategic investiture and attack of scientific warfare. The enemy is not yet conquered, but is yielding.

We have now in Pennsylvania, all inside of seven years, since the State itself took up the work a far-reaching and active campaign of education, State-wide social service, adequate sanatorium beds for strictly sanatorium cases, adequate dispensary service, and the standard of all branches of the service is of the highest; but an essential and important link in this admirable chain forged by the Commissioner of Health, Dr. Samuel G. Dixon, has not yet been added. It is plainly the duty of local communities of 50,000 or over to forge that link for themselves in providing local care for the far-advanced consumptive, who is unsuitable for strictly sanatorium care. Did there but exist in the more populous centres, strategically placed, twelve fairly large hospitals for this group of cases, for there are twelve cities of the class specified, Pennsylvania would be adequately equipped for this branch of the service, so fundamentally important in the prevention of the spread of infection.

Deaths in Pennsylvania from All Forms of Tuberculosis from 1906 to 1913 Inclusive and the Annual Death-rate.

Year.	Popula- tion.	Deaths.	Rate per 100,000.
1906,	7,141,766	10,780	150.9
1907,	7,279,792	10,825	148.7
1908,	7,417,816	10,211	137.8
1909,	7,555,841	10,122	133.9
1910,	7,693,866	10,285	133.7
1911,	7,831,904	10,604	135.2
1912,	7,969,942	9,872	123.7
1913,	8,107,980	9,802	120.9

Previous to the law of 1905, Pennsylvania as a State had no registration of births and deaths and no mortality statistics. The accompanying table and chart explain themselves and show the steady

and marked reduction in the death-rate from tuberculosis since the State took up this work, and the position of the State Sanatoria and State Dispensaries.*

*I wish to acknowledge my indebtedness for the charts and other statistical data concerning the State work to Dr. Samuel G. Dixon, the Commissioner of Health since the creation of the Department in 1905, and to Dr. B. Franklin Royer, Chief Medical Inspector, for much kind assistance and suggestive and helpful ideas in the preparation of this paper.



DIVISION OF MEDICAL INSPECTION.

B. FRANKLIN ROYER, M. D.,
Chief Medical Inspector.



DIVISION OF MEDICAL INSPECTION

1. ORGANIZATION.
2. ADMINISTRATIVE WORK.
 - Field Work.
 - Infant Welfare Work.
 - Special Communications.
3. PREVALENCE OF CERTAIN COMMUNICABLE DISEASES.
4. SPECIAL REPORTS.
 - Typhoid Fever*:—Grove City, C. J. Hunt; New Holland, C. J. Hunt; Scottsdale, C. J. Hunt; Warren, C. W. Schmehl; Marysville, John J. Mallowney; Skippackville, B. Franklin Royer; Lehigh University, C. J. Hunt; Tower City, C. J. Hunt; Hershey, C. J. Hunt; Monessen, C. J. Hunt; Swissvale, C. J. Hunt; Kittanning and Ford City, T. N. McKee; Radnor Township, H. M. Hiller; Drexel Hill, H. M. Hiller.
 - Diphtheria*:—Glen Mills Schools, C. J. Hunt; Allentown, C. J. Hunt.
 - Scarlet Fever*:—Donora, C. J. Hunt.
 - Dysentery*:—Freeland, C. J. Hunt.
 - Anthrax*:—Berwick, C. B. Arment.
 - Leprosy*:—Wilkes-Barre, B. Franklin Royer.
 - Foot and Mouth Disease*:—Sadsbury Township, Lancaster County, C. J. Hunt.
 - Smallpox*:—Bellefonte, C. J. Hunt; Harrisburg, C. J. Hunt; North East and Erie County, J. W. Wright; Billmeyer, J. L. Mowery and John J. Mallowney; Jamestown, C. J. Hunt.
5. INSPECTION OF SCHOOLS AND SCHOOL CHILDREN.
 - Medical Inspection in Fourth Class School Districts.
 - Sanitary Inspection in Fourth Class School Districts.
 - Medical Inspection in Third Class School Districts.
 - Feeble Minded and Epileptics in Fourth Class School Districts.
6. ABSTRACTS OF THE REPORTS OF COUNTY MEDICAL INSPECTORS.
7. STATISTICS OF THE WORK OF COUNTY MEDICAL INSPECTORS.
8. STATISTICS OF THE WORK OF HEALTH OFFICERS.

ORGANIZATION.

No change has taken place in the general organization of the Division of Medical Inspection since filing the last annual communication.

Such minor changes as have taken place in the corps of stenographers, permanent clerks, and the entire list of temporary clerks will be found in the general report of the Commissioner of Health. A slightly larger number of temporary clerks was required in the Sub-Division of School Inspection, owing to the increased number of districts accepting medical inspection, and further, because it was necessary to vacate early in December committee rooms occupied temporarily prior to the beginning of the session of the Legislature.

FIELD WORK

We have been fortunate during the year 1914 in having but few large epidemics of communicable disease throughout the Commonwealth, and the assistance of the officers in the Medical Division has been required less frequently than in previous years.

In a number of instances, the Chief Medical Inspector, the Associate Chief Medical Inspector, or the Assistant Chief Medical Inspector rendered assistance in various communities for the purpose of establishing a diagnosis in doubtful cases of communicable diseases, or in determining the source of infection in epidemics. The field work of this sort of greatest moment was in connection with epidemics of typhoid fever in Grove City, Mercer County, in March; in Scottdale, Westmoreland County, Warren, Warren County, and Marysville, Perry County, in August; in Skippackville, Montgomery County, and Coatesville, Chester County, in September; in Johnstown, Cambria County, Lehigh University, Northampton County, Monessen, Washington County, Tower City, Schuylkill County, and Hershey, Dauphin County, in October; in Kittanning and Ford City, Armstrong County, in December.

In September a severe outbreak of diarrhoeal disease in Freeland and vicinity, Luzerne County, required assistance both from the Medical Division and the Engineering Division.

Assistance was rendered communities for the purpose of establishing or reversing the diagnosis of smallpox at State College, Centre County, in January; in Harrisburg, Dauphin County, and Lewistown, Mifflin County, in February; at Kennett Square, Malvern, and Toughkenamon, Chester County, and Billmeyer, Lancaster County, in March; in Gettysburg, Adams County, in April; in York, York County, in August; and in Jamestown, Mercer County, in November.

Help and advice were given the town of Donora, Washington County, in October on account of an outbreak of scarlet fever; Allentown, Lehigh County, and the Glen Mills Schools, Delaware County, in November, on account of an undue prevalence of diphtheria.

In August the Department removed a National Guardsman, while suffering from diphtheria, from the State Encampment at Mt. Gretna to his home in Lewistown.

In September the Chief Medical Inspector visited Wilkes-Barre for the purpose of establishing the diagnosis of leprosy in a Syrian, long a citizen of the United States, apprehended in Philadelphia and transferred to his home in the city of Wilkes-Barre.

Considerable detail concerning the larger of these epidemics and the larger pieces of field work will be found in the section of this communication devoted to special reports.

The various officers of this Division represented the Department in different capacities in meetings of local, state, and national asso

ciations, and gave public addresses on a variety of subjects on numerous occasions in the course of the year. Reference to these conferences, and other instances in which officers of this Division represented the Department, will be found in the General Report of the Commissioner of Health.

INFANT WELFARE WORK.

The Medical Division has continued to aid the various active agencies throughout the Commonwealth looking toward the lessening of infant mortality and improving conditions influencing the health of young children. Form 20, the circular entitled "Save the Babies," had already become popular in seven different languages, and during the summer of 1914 we were fortunate in having a social worker connected with the Associated Charities of Johnstown, Miss Etelka Weiss, translate this circular into Magyar.

The interest in Baby Saving Shows persists and a number of communities not having had an active campaign, or at least not having organized exhibits, have solicited the help of the Department. Among the more important Exhibits that may be mentioned was one in Erie on the 26th of April under the auspices of the Women's Club of Erie, in cooperation with the local health authorities. The Chief Medical Inspector made several addresses. The major portion of the Exhibit of the Department was afterwards carried to a number of community houses and local recreation centres in the city of Erie where nurses and doctors gave numerous demonstrations and practical talks.

In June from the 5th to 12th inclusive, an active welfare exhibit was conducted in Oil City, Venango County, under the auspices of the Women's Club, the Y. W. C. A., the Y. M. C. A., and the Venango County Medical Society. The Assistant Chief Medical Inspector spent several days there and gave a number of practical talks.

A very active campaign was conducted in a series of towns in the Anthracite Coal regions, where by request of the local authorities and social workers, we merged the School Hygiene Exhibit with the material usually loaned for Baby Saving shows and also a good portion of the material ordinarily used with the Traveling Tuberculosis Exhibit. These combined materials were shown in connection with excellent local additions from the 16th to 20th of June in Shenandoah, 22nd to 27th of June in Mahanoy City, June 30th to July 3rd at Pottsville, and from the 13th to the 18th of July at Williamstown. In all of these towns the Visiting Nurses Association and the local County Anti-Tuberculosis Society actively cooperated, while in the Lykens Valley exhibit at Williamstown, practically every one in the community cooperated in an active way in making the Exhibit a success, large numbers of persons traveling from Lykens and Tower City by trolley to see the exhibit and listen to the lectures.

The Assistant Chief Medical Inspector and the Lecturer of the Department's Tuberculosis Exhibit gave freely of their time in each of these towns. The Chief Medical Inspector visited Williamstown and made the opening address.

A very active baby saving show was organized at Johnstown extending from the 20th to 29th of July. The Assistant Chief Medical Inspector and the Lecturer with the Department's Tuberculosis Exhibit both assisted the citizens of this town. Dr. W. G. Turnbull, the Director of the Tuberculosis Sanatorium at Cresson, his deputy, Dr. S. H. Rinehardt, and one of the resident physicians, Dr. R. V. Zabarkes, each gave lectures at frequent intervals, Dr. Zabarkes talking in a number of foreign languages.

Requests have continued coming from time to time during the year from points outside of the State for the bulletin on "How to Organize a Baby Saving Show" and for samples of the literature which we distribute in connection with our infant welfare campaigns. For a very well organized "Pure Food and Better Baby Exposition" in Dallas, Texas, the Department was requested to send material and did exhibit all that portion of our loan display that we have blueprinted and samples of all of the literature which we distribute here in Pennsylvania.

This Infant Welfare work of the Division might well be extended and the campaign might be organized more actively with profit.

REVISION OF CIRCULARS.

Forms 4, 8, 10, 11, 14, 17, 18, 47, 48, and 49 were re-edited and republished during the year 1914, the changes in each being so slight as not to justify their reproduction in this communication.

Form 1-A promulgated during 1913 was given widespread circulation throughout the Commonwealth during the early months of 1914 and accomplished a great deal of good in the line of abolishing public drinking cups, and has resulted in the reporting of a number of cases of scabies and impetigo contagiosa.

During the latter part of the summer and early autumn the European war caused a tremendous advance in the selling price of potassium permanganate and at times made it almost impossible to secure a sufficient supply for use of the Health Officers in the field in performing room disinfection. As soon as the Department's chemists worked out a substitute formula (referred to in detail in the Commissioner's section of this report) a supplement to Form 16 was issued and sent to the County Medical Inspectors and Health Officers and Tuberculosis Dispensaries of the State, outlining in some detail the methods to be followed and calling attention to a special communication issued by the Commissioner to field officers throughout the State as to how sodium dichromate might be used as a substitute. The revised supplement to Form 16 reads as follows:—

Form 16-A

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF HEALTH.

Revised Supplement to Form 16.

An equally efficient method of releasing Formaldehyde gas, and since the price of Potassium Permanganate has gone so high, a more economical plan, is to take ten ounces by weight of Sodium Dichromate to one pint of Formaldehyde solution, and one and one-half fluid ounces each of Commercial Sulphuric Acid and Glycerine.

The Formaldehyde as shipped to Department Health Officers in cold weather contains the commercial sulphuric acid and glycerine. The Sodium Dichromate is to be spread in a thin layer over the bottom of disinfecting pans exactly as was done with the Potassium Permanganate, then the Formaldehyde will be poured into the vessel and a quick departure made from the room.

The reaction resulting from the release of the gases is a little more rapid than with Potassium Permanganate and the deposit remaining in the container is a little more corrosive. For this reason all containers should be removed from the room one-half hour after starting the disinfection process, and the deposit should then be removed and the vessel thoroughly washed out with soap and water.

In all other ways the disinfection may be performed exactly as outlined in Circular 16 under the Permanganate method. For each 1,000 cubic feet of space to be disinfected, one pint plus three ounces (19 ounces) of the solution will be used with one and one-third measures (10 ounces) of sodium dichromate.

Samuel G. Dixon, M. D.,
Commissioner of Health.

Jan. 11, 1915.

N. B. Avoid storing in cold places. It should be kept in a moderately warm place always above freezing point.

SPECIAL COMMUNICATIONS.

In January a letter was sent to the registered nurses of the Commonwealth calling attention to the regulation of the Advisory Board forbidding the use of the common drinking cup. This letter reads as follows:—

To the Registered Nurses of Pennsylvania:

I am forwarding to each registered nurse in the Commonwealth certain of the Department's literature, together with the Act for the prevention of blindness, an act which places additional duties and responsibilities on nurses and midwives, and a new regulation of the Advisory Board of the State Department of Health.

Nurses will be especially interested in the new rules and regulations forbidding the use of the common drinking cup, the common roller towel, and certain other pernicious practices, and can render great assistance because of their splendid opportunities to convince the public of the sanitary reason for providing individual towels or single service towels, and individual drinking cups, single service cups, or bubbling fountains.

Nurses and physicians fully appreciate how frequently Impetigo Contagiosa, Syphilis, and other infectious diseases of the mouth are transferred from individual to individual by means of the common cup, and have seen abundant evidence of the vicious roller towel transmitting the virus of Trachoma, Pink-eye and other communicable eye affections. Nurses keenly appreciate the possibility of transmitting communicable disease affecting the hands or other surfaces of the body through having several individuals use the same towel.

I know it will give every Registered Nurse in Pennsylvania a great deal of satisfaction to assist in wiping out these vicious practices.

Samuel G. Dixon.

In August a communication was sent to the physicians of the State calling their attention to the prevalence of trachoma through-

out the Commonwealth and urging prompt and early reporting of every case coming under their observation. This communication reads as follows:

Dear Doctor:—

Trachoma has been a reportable disease in this Commonwealth since 1905. The Act of May 14, 1909, placed it definitely among the diseases requiring reporting forthwith in writing to the health authorities.

Recent investigations made in various sections of the Commonwealth lead us to believe that a good many cases of trachoma are not being reported as required by law.

I make this appeal for you to report your cases immediately. If the profession does not respond to this request to comply with the law, it will be my duty to report the guilty to the Legal Division for action.

Very truly yours,

Samuel G. Dixon,
Commissioner of Health.

In July the usual letter was sent to the Department's Health Officers in second class townships calling their attention to the great reduction in the death rate from typhoid fever and urging the establishing of more rigid precautions on every infected premises, and also calling attention to the slogan of the Department, "Wipe out typhoid fever by killing the germs in the bed pan" and a further slogan, "Prevent secondary cases by disinfecting the hands of the attendants, and by disinfection of utensils and bedding."

In August a letter was sent to the trained nurses and midwives throughout the Commonwealth, together with Forms 34-A and 34-B, providing an easier method for midwives and nurses to report inflammation of the eyes, and a suitable communication was sent to the Secretaries of Boards of Health throughout the State, enclosing copies of these Forms sent to the midwives and nurses.

Form 34-A.

District No.....

Commonwealth of Pennsylvania.

DEPARTMENT OF HEALTH.

INFLAMED EYES IN INFANTS.191

(Report to Health Authorities).

In compliance with an Act of Assembly, approved the 5th day of June, 1913, I beg to report that the infant of Mr. and Mrs., residence Borough or City of or Township of County of is now suffering with inflammation of the eyes.

In addition to forwarding this report to the proper health authorities I forwarded a similar report to Dr., residence on 191....

P. O.

N. B. Midwives, nurses, and other persons having the care of infants whose eyes become inflamed or swollen or reddened within two weeks after birth are required by law under penalty to report the same in writing within six hours after the discovery thereof to the proper health authorities and to some regularly qualified practicing physician in the district.

SAMUEL G. DIXON,
Commissioner of Health.

Form 34-B.

Commonwealth of Pennsylvania.

DEPARTMENT OF HEALTH.

INFLAMED EYES IN INFANTS.

(Report to Physicians).

Dear Doctor:—

In compliance with an Act of Assembly, approved the 5th day of June, 1913, I beg to report that the infant of Mr. and Mrs. residence Borough or City of..... or Township of..... County of is now suffering with inflammation of the eyes.

P. O.

N. B. Midwives, nurses and other persons having the care of infants whose eyes become inflamed or swollen or reddened within two weeks after birth are required by law under penalty to report the same in writing within six hours after the discovery thereof to the proper health authorities and to some regularly qualified practicing physician in the district.

SAMUEL G. DIXON,
Commissioner of Health.

In December, in each county where any considerable number of cases of smallpox developed, notably in Erie, Mercer, Tioga, and Warren, a letter was sent to the Secretary of each School Board in the county urging rigid enforcement of the vaccination laws, the communication reading as follows:

Dear Sir:—

There has been widespread contact with mild cases of smallpox in the vicinity of County. During the course of the Department's investigations it was found that in several school districts the observation of the vaccination law has been totally or in part neglected.

In order to prevent the continuance of the disease and to prevent an epidemic, it is absolutely necessary that your Board instruct the teachers to observe the law strictly, not only now but at all times.

Please direct your teachers to exclude from the schools of your district every child who has not been successfully vaccinated or who has not filed a certificate to that effect, and to readmit them only when certificates are presented showing that they have been successfully vaccinated.

Very truly yours,
Samuel G. Dixon,
Commissioner of Health.

A communication was sent at the same time to every doctor in the county advising that the County Medical Inspector would see every case of chicken pox reported, for the purpose of confirming the diagnosis, eliminating any possible errors that might occur through failure promptly to recognize the case, and further, urging every physician having charge of patients presenting symptoms resembling grippe to continue his visits to such patients for several days after the fever had subsided and to discontinue his visits only after satisfying himself that no eruptive disease had developed.

Copies of each communication were sent to the Boards of Health, of the counties affected, together with a recommendation to them to have a medical officer see and confirm the diagnosis of every case of chicken pox.

PREVALENCE OF CERTAIN COMMUNICABLE DISEASES.

TYPHOID FEVER.

Typhoid Fever shows a most gratifying decrease, both in the number of cases sickening during the year 1914 and in the number of cases dying. A total of 7,653 cases of typhoid fever were reported to the Department during the year for the entire State, a few over two thousand less than were reported in our previous best year, 1912. The deaths for the year reached the low figure of 1,075, by far the smallest number of deaths from this disease recorded in the history of the State Department of Health. This low figure completes a decline beginning with the organization of the State Department of Health, both for morbidity and mortality, making a total reduction of nearly seventy-five per cent. in nine years. The most notable outbreaks of typhoid fever occurring during the year will be only briefly referred to in this portion of the annual communication. More extended notice of each such outbreak will be found in the section devoted to special reports.

Typhoid Epidemics. In January and February an outbreak of typhoid fever occurred among the students and citizens of Grove City and the college bearing the name of this municipality. A detailed investigation made by the Associate Chief Medical Inspector and representatives of the Engineering Division proved the outbreak to be due, in all probability, to the pollution of a well through a defective casing. Two hundred and one cases were reported in this epidemic, some of the students being traced with difficulty to their homes in various sections of the State.

In January and February a very interesting outbreak of typhoid fever occurred in the vicinity of New Holland, Lancaster County, a total of fifty-six persons succumbing to the infection. This outbreak seemed to be proven fairly definitely to be due to polluted oysters.

In June and July a milk-borne epidemic of typhoid fever occurred at Clymer, Indiana County, and small outbreaks occurred at Drexel Heights, Delaware County. In each instance investigations were made by the Department's County Medical Inspector.

In June and July twenty-one cases of typhoid fever were investigated by the Associate Chief Medical Inspector and representatives of the Engineering Division at Scottdale and vicinity, in Westmoreland County, where it seemed altogether probable that water had caused the epidemic.

In September a noteworthy outbreak of typhoid, milk-borne in origin, occurred throughout the scattered villages of Skippackville, Cedars, and Worcester, Montgomery County, the outbreak extending for five miles along the Skippack Pike.

An outbreak of forty-six cases occurred in Johnstown in December that was in all probability milk-borne in origin, as was also an outbreak in the borough of Warren where seventy cases were reported. Both of these epidemics were investigated by the Associate Chief Medical Inspector. During the same month an outbreak of twelve cases, probably due to polluted water, occurred at Dudley, Huntingdon County, the investigation being made by the County Medical Inspector and a representative of the Engineering Division.

During the early autumn months a small outbreak occurred at Monessen, Westmoreland County. An investigation made by the Associate Chief Medical Inspector seemed to prove this epidemic due to polluted local water supplies.

A very interesting epidemic occurred among students who boarded in the Commons of Lehigh University shortly after the autumn semester began. This outbreak was due in all probability to the employment of a carrier in the Commons dining room, the only link in the chain of evidence needed to make the line of proof positive being the finding of the germs in the excreta of the suspected carrier. Details of the investigation made by the Associate Chief Medical Inspector and representatives of the Engineering Division will be found in an extensive report further along in this communication.

An epidemic of twenty-seven cases in Swissvale, Allegheny County, was investigated by representatives of the Engineering Division and reviewed by the Associated Chief Medical Inspector and the County Medical Inspector in October. The source of infection in all probability was polluted milk.

In November an outbreak of forty cases of typhoid fever was investigated at Hershey and vicinity by the Chief Medical Inspector, the Associate Chief Medical Inspector, and the County Medical Inspector, the origin of the epidemic remaining indeterminate.

In September, October, and November a milk-borne epidemic occurred at Tower City and vicinity, Schuylkill County. An investigation was made by the Associate Chief Medical Inspector, representatives of the Engineering Division, and the County Medical Inspector of the Department. Near the end of the year two outbreaks occurred in Armstrong County, one at Ford City and the other at Kittanning. These outbreaks were investigated by the Associate Chief Medical Inspector and representatives of the Engineering Division, and are reported in full detail by the Department's County Medical Inspector.

SCARLET FEVER.

Scarlet fever was unduly prevalent during the year, a total of 17,190 cases being reported. The disease was not especially virulent in type, and this may be the reason why the number of deaths was not excessive, a total of 860 deaths being recorded for the entire year, less than for the year 1913, when 915 deaths occurred, or in 1908, 1909, and 1910, when considerably more than 1,000 lost their lives each year through this disease.

German measles was exceptionally frequent in certain sections of the State and it seems entirely probable that the two exantheas were not infrequently confused, in some instances cases being recorded as scarlet fever that were actually German measles, in others, mild cases of scarlet fever passing for German measles and their too early release and return to school may account for other mild cases.

The prevalence of scarlet fever has remained excessive near the great manufacturing settlements in and around Pittsburgh and throughout the greater portion of southwestern Pennsylvania. As the year ends, however, there is a notable lessening of the prevalence of this disease, and it seems as though health regulations were beginning to show some signs of controlling the epidemic.

The only outbreak that was investigated extensively by the Department was that at Donora, Washington County, where the Department's local representatives made several studies with the health authorities and where later the Associate Chief Medical Inspector investigated the entire outbreak.

Clarion, Clarion County, and Ridgway, Elk County, at one time during the year showed an unusual prevalence of the disease. Schools were closed and special assistance was rendered by the County Medical Inspectors of the Department.

DIPHTHERIA.

Diphtheria has continued in about the same number throughout the State, a total of 16,070 cases being reported, as against 16,867 in 1913, the total number being fewer than was reported in any year since 1911. One thousand nine hundred twenty-five deaths occurred from this disease, being less than at any time since the creation of the Department of Health.

During November the diphtheria situation became so serious in the city of Allentown, Lehigh County, that a special investigation was directed by the Department. The Associate Chief Medical Inspector reviewed the work of the local authorities and studied briefly the history of all the cases occurring during the calendar year—two hundred and eighty-five in all—and determined that laxity of quarantine regulations was in good part responsible for the undue prevalence of the disease.

SMALLPOX.

Smallpox has been almost as prevalent in Pennsylvania during 1914 as during any previous year since the organization of the Department. This is not surprising as the usual ten year cycle has more than expired and the time is overdue for the epidemic that should have occurred had the usual cycles been reproduced.

The greatest prevalence of this disease was in Erie County, the epidemic starting at North East and sweeping throughout the larger part of the county, even to the city of Erie. The earliest cases were not recognized as smallpox and were not even reported as chicken pox. The infection probably came from the state of Washington. A good section of Erie County and vicinity is influenced by the anti-vaccination teaching emanating from the city of Erie and from Niagara Falls, and as a result, we have in Erie County a large unvaccinated and unprotected population. The total number of cases in Erie County alone was considerably in excess of three hundred. It is perhaps true that the epidemic has done some good in that we now have a larger protected population in the towns and rural districts of this county than we have had in a good many years. Should a severe outbreak develop now many individuals who have accepted vaccination would be spared.

Smallpox was introduced during the year at West Chester, Malvern and Toughkenamon, Chester County, Billmeyer, Lancaster County, Gettysburg, Adams County, York, York County, Jamestown and various points in Mercer County, and in Tioga and Warren Counties, and at other scattering places throughout the State. At no place, however, except in Erie County, and Jamestown, did the disease reach anything like epidemic proportions.

ANTHRAX.

A special investigation made by the County Medical Inspector for Columbia County of two cases of anthrax is of enough interest to be included in the section of this communication devoted to special reports. Other cases occurred in the Commonwealth but no unusual conditions merited special reports.

LEPROSY.

Two cases of leprosy were reported during the year. The first case, F. S., an Italian, was reported from Oil City, Venango County, in March, the diagnosis at first being in doubt. The attending physician, Dr. J. F. Davis, forwarded specimens of tissue to the Laboratory for extended study, resulting in confirmation of his diagnosis. The leper was immediately placed under absolute quarantine on the grounds of the Home for the Indigent of the county. Later, this afflicted person escaped into New York State, where he was for a time under observation, but he again disappeared.

The second case was reported to the Department from the city of Wilkes-Barre just after having been transferred back to his place of residence from Philadelphia. Investigations by the Chief Medical Inspector, together with a complete study of specimens forwarded to the Laboratory, resulted in confirmation of the diagnosis. This person is now under absolute quarantine in his own home in Wilkes-Barre. A report giving some details will be found among the special reports of this communication.

In neither case could we determine the source of infection.

MEASLES.

Measles was much less prevalent during 1914 than during the preceding year, a total of 26,000 odd cases being reported for the entire year, the total number being considerably less than any year since 1907. A correspondingly low death rate from measles was also noted, a total of 549 deaths being recorded, this being several hundred fewer than have occurred any year since the creation of the Department of Health and over a thousand less than for the year 1913.

QUARANTINE WORK.

In the course of the year 24,811 morbidity reports were forwarded to the Department Health Officers in the field and quarantine, either absolute or modified in character, was established on 19,021 premises. In a tabulated summary in another section of this communication will be found details concerning the number of rooms disinfected, the number of houses placarded, and the number of the various forms received and issued by health officers. It is of some interest to note that 40,876 rooms were disinfected by means of formaldehyde gas.

County Medical Inspectors made important field investigations for the purpose of establishing diagnoses and enforcing proper quarantine regulations for the various communicable diseases as follows:—

Smallpox,	724	Epidemic Meningitis,	4
Typhoid fever,	340	Chicken pox,	960
Diphtheria,	683	Whooping cough,	507
Scarlet fever,	674	Measles,	1,497

The same custom has been continued in having the County Inspector establish rigid regulations on dairy farms where premises were quarantined for typhoid fever, diphtheria, scarlet, epidemic meningitis, or smallpox. Such regulations were established on dairy premises as indicated for the following diseases, and in the number of instances set opposite the name of each disease:—

Typhoid,	289	Scarlet fever,	121
Smallpox,	15	Epidemic Meningitis,	2
Diphtheria,	145		

In 227 instances it was possible to make satisfactory arrangements for some one not residing in the house with the infected case to continue the work about the dairies and to do the marketing of the milk, often one of the well members of the family, having been given an antiseptic bath and donned disinfected clothing, removed from the house and remained out of it. In some instances neighbors came on the premises and did the work, washing the containers, etc.

In 292 instances the sale of milk was discontinued because no satisfactory arrangements could be made for handling the milk safely. In fifty-two instances the herd was transferred to a neighbor's premises.

In 420 instances our County Medical Inspector found on making field investigations that children infected with various communicable diseases had been in school during the infectious stage and for this reason these schools were closed until disinfected.

In the performance of all of these various duties the County Medical Inspectors traveled a total of 56,560 miles.

A more extended summary of the important work of Health Officers in handling communicable diseases will follow the abstracts of the County Medical Inspectors.

SPECIAL REPORTS

REPORT OF AN INVESTIGATION REGARDING AN EPIDEMIC OF DYSENTERY AND TYPHOID FEVER IN GROVE CITY.*

Pursuant to your instructions, I proceeded to Grove City, Mercer County, on February 28th, in order to review the diagnoses and give an opinion relative to an epidemic of acute dysentery and typhoid fever in that borough.

Assistant Engineers H. E. Moses and R. E. Irwin had gone to this place on February 6th, soon after the prevalence of dysentery became known. Between the time of their arrival and March 1st a large number of cases of typhoid fever were reported, in the diagnosis of which there had been disagreement among a few of the twelve physicians practising in the borough. A census of all cases of typhoid fever had been made before my arrival; this was continued for cases which developed subsequently and the total figures are here presented in the usual tabulated form. This work was carried out under the direction of Mr. Moses, by seven Sanitary Inspectors.

Grove City is located in the south-eastern corner of Mercer County on the Bessemer and Lake Erie Railroad. It is approximately fifty miles due north from Pittsburgh and in 1913 had an estimated population of 4,504. The borough is divided into four wards. The line dividing the First and Fourth Wards from the Second and Third Wards parallels the eastern bank of Wolf Creek. The latter bisects the city, its course being due south, and is tributary to Slippery Rock Creek which flows into Beaver River. The tracks of the Bessemer and Lake Erie Railroad bisect the city at right angles to the creek and approximately parallel the ward line separating the First and Second from the Third and Fourth Wards.

The growth of this borough has been constant, increasing from 1,160 in 1890 to 3,674 in 1910, according to Federal census. The occupation is chiefly educational although there are a number of industries of local importance. The latter are:—the Bessemer Gas Engine Company, the Bessemer Foundry, the Grove City Planing Mill Company, the King Planing Mill and Supply Company, the Grove City Broom Works, and the Montgomery Broom Works.

*The work of the Engineers in connection with this epidemic is detailed in section 23 of the report of the Division of Sanitary Engineering.

Grove City College, devoted to academic courses and having an enrollment for the entire year of nearly eight hundred, is located on the west shore of Wolf Creek in the First Ward. The actual enrollment at the time of the epidemic was about four hundred.

The general sanitary conditions are good, the streets, though irregularly planned, being well drained and a large number of properties being connected with the municipal sewer system which was installed during the past two years.

EPIDEMIOLOGICAL FEATURES.

Up to the date of making this report, a total of two hundred and one cases of typhoid fever have been reported. The history as to source of the typhoid infection differs in no way from that of the dysentery infection. For that reason and because of the difficulties in securing accurate data for the many cases, only the chief features of the typhoid cases are presented.

Distribution. The distribution for purposes of simplicity is based on residence at time of infection:

- 187 cases resided in Grove City,
- 9 cases resided in Pine Township, Mercer County,
- 2 cases resided in Irwin Township, Mercer County,
- 2 cases resided in Wolf Creek Township, Mercer County,
- 1 case resided in Mercer Township, Butler County.

Certain cases, students in the College, were taken ill at home on vacation visits or were removed to their homes after the onset of clinical symptoms.

It has been shown that the non-resident cases visited Grove City and obtained food or drank water there during the period between January 28th and February 6th.

Water. A description of the water system is included in the report of the engineering division. In view, however, of the peculiar distribution and the necessity for a correct epidemiology, it is necessary, for purposes of clarity, to outline certain features.

The water supply is from four drilled wells located on the west branch of Wolf Creek within the borough.

There are two pumping stations, each procuring water from two wells. The upper pumping station, with wells 1 and 2, is located in the northern part of the borough and the lower pumping station, with wells 3 and 4, is located in the southern part. The water from the upper pumping station is distributed practically entirely to the Third and Fourth Wards, north of the tracks of the Bessemer and Lake Erie Railroad. There are, however, connections with the other Wards and it is possible for water from wells 1 and 2 to mingle in the mains with water from wells 3 and 4. The lower pumping sta-

tion supplies the water to the southern part of the borough, made of the First and Second Wards, south of the Bessemer and Lake Erie Railroad tracks.

The wells are free flowing but not enough so as to furnish a supply sufficient for the increasing population. The use of well 1 had been discontinued and well 3 was out of service. For that reason the northern portion of the borough was supplied almost exclusively from well 2 and the southern portion from well 4.

A suction pump had been in use at the latter but in order to increase the water supply, air pressure had been introduced on or about November 1, 1913. Coincident with the rise of the waters in Wolf Creek on November 22, there occurred an outbreak of dysentery, the number of cases of which is not known. Though it is not definitely shown, it is evident from local reports and from the record of precipitation that the waters did not again reach such a height until January 28, 1914. Coincident with this rise there occurred a second outbreak of acute dysentery which was at its maximum about the second of February. The cases continued to be reported for two weeks with many recrudescences of original cases, the physicians reporting 1,084 cases as seen by them during this second outbreak, but the actual number of persons having dysentery was possibly at least twice as many. The first cases of typhoid fever were reported on February 17. The estimated dates of onsets of these cases of dysentery, which were treated by physicians and of the cases of typhoid fever are shown in the plotted curves on the accompanying diagram.

The water of the creek had previously been frequently higher than the recorded flood heights occurring on November 22, 1913 and January 28, 1914. Changes in flow of this stream are exceedingly variable, as is commonly noted in deforested regions.

It is evident that air pressure on well 4 was in some way responsible. Investigation showed that the water of the creek had ingress through erosions into the well casing at such times as the height of the creek level was above a wasteway pipe, placed for ground drainage. Under ordinary conditions, such as existed prior to November 22, pollution of the well water would not occur. But, the addition of air pressure overcoming the resistance of the outflow through the wasteway, led to a direct introduction of creek water.

Records of precipitation and of flood heights secured by the engineers show that the water of the creek was high enough for this to take place on but two dates subsequent to the use of air pressure—namely, on November 22, 1913 and January 28, 1914. As stated above the outbreaks followed only these two changes of flow of Wolf Creek.

Additional evidence that water was the means of infection is found in the distribution of cases. It has been noted that the water from wells No. 3 and No. 4 was distributed almost entirely to the First and Second Wards. Well No. 3 had not been in service for a considerable period of time, though the date could not be exactly ascertained. It is, however, evident that practically all of the water supplied to the First and Second Wards came from well No. 4 alone. The distribution of cases in relation to Ward lines was as follows:

Ward.	Cases.
1,	72
2,	92
3,	13
4,	10
-	187
Outside of borough,	14
	<hr/> 201

The distribution of persons suffering with acute dysentery did not differ from that of the cases of typhoid fever. A census of the dysentery cases was not made but the evidence of physicians and of common report was that residents living "above the tracks," or north of the Bessemer and Lake Erie Railroad, in the Third and Fourth Wards for the most part escaped infection.

A tabulation of the water supplies used by those infected with typhoid fever showed that that of the waterworks of the borough had been generally drunk by them, about a fifth having used also water from other sources.

TABULATION OF THE CASES OF TYPHOID FEVER BY DATES OF ONSETS AND REPORTS.

	On-set.	Re-port.		On-set.	Re-port.		On-set.	Re-port.
Feb. 10,	1	.....	Feb. 27,	1	21	March 16,	1	.....
11,	1	.....	28,	3	24	17,	2	2
12,	4	.....	March 1,	1	2	18,	2	.....
13,	6	.....	2,	2	16	19, .....	.....	1
14,	17	.....	3,	2	4	20, .....	.....	2
15,	6	.....	4,	2	9	21, .....	.....	2
16,	14	.....	5,	1	4	24, .....	.....	1
17,	11	3	6,	1	6	25,	1	2
18,	14	.....	7,	1	1	31, .....	.....	1
19,	5	1	8,	1	.....	April 6, .....	.....	1
20,	23	8	9, .....	.....	9	15, .....	.....	1
21,	14	1	10, .....	.....	5	17, .....	.....	1
22,	23	1	11,	1	1	21, .....	.....	2
23,	8	5	12,	1	2	23, .....	.....	1
24,	14	6	13,	1	1	Unstated, .....	.....	4
25,	2	.....	14, .....	.....	1	Not reported in	.....	.....
26,	3	10	15,	1	.....	Grove City, ...	.....	26
								<hr/> 201

Despite the alleged reluctance on the part of certain physicians to establish a diagnosis of typhoid fever, it should be noted that the

maximum number of cases were reported at a time when it is evident that the clinical manifestations were first apparent. Also, the occurrence of the maximum number of cases during a period of ten days indicates the abruptness of infection, water-borne and common to all.

Age and Sex.—A tabulation of age and sex shows the following:

	Male.	Female.	Total.	Per-centage.
0-4,	5	1	6	3.0
5-9,	15	14	29	14.4
10-14,	11	14	25	12.4
15-19,	29	31	60	29.8
20-24,	16	13	29	14.4
25-29,	7	9	16	8.0
30-34,	3	6	9	4.5
35-39,	2	4	6	3.0
40-44,	1	2	3	1.5
45-49,	4	3	7	3.5
50-54,	1	1	2	1.0
55-59,	1	2	3	1.5
60-64,	1	3	4	2.0
70-74,	0	1	1	0.5
Unstated,	1	0	1	0.5
	97	104	201	

Males, 48.3 per cent.; Females, 51.7 per cent.

The table shows no unusual departure from the common susceptibility age, unless it is that lower age groups are somewhat predominant. This is readily accounted for by the large number of students in school and college exposed in the area of distribution of polluted water.

Occupation. A tabulation of occupations shows the following:

Students,	117
Housewife,	32
Child,	9
At home,	7
Domestic,	7
	172
All other,	29
	201

The fact that one hundred and seventy-two, or more than four-fifths of all cases, were for the most part persons in domestic relations indicates a transmitting agent of wide distribution. No one occupation exposed residents to infection unless it was that in student life. One hundred and seventeen, or 58.2 per cent. of the cases were students.

Of these, fifty-three were students attending Grove City College. At this time there were three hundred and ninety students on the rolls, two hundred and fifty girls and one hundred and forty boys. It is the college requirement that all female students shall be housed in one of the three dormitories: The Colonial, Cunningham Hall, and Pelton Hall. These are all on the College Campus in the First Ward.

The male students room in private houses throughout the town, but table board is provided for them in the Commons on the Campus. For these reasons the expected morbidity of students, but especially of female students, would be high. It turned out, however, that thirty of the boys and twenty-three of the girls became ill, which means a general morbidity rate of 21.4% for the boys and 9.2% for the girls. The occurrence of disease among the students was naturally a matter of great concern and the studies made at the time of the investigation were important for the guidance of the authorities of the College.

Of the hundred and seventeen persons recorded as students, sixty-four were in attendance at the public schools. Thirty-nine of these were students in the Central School Building in the Second Ward and twenty-one belonged to the Lincoln School in the Third Ward, and four went to township schools outside the borough.

Analyses of the water supplies were, of course, made in the Department's Laboratories. These proved negative for sewage organisms in every instance. No specimens were collected before treatment of the water was begun by the engineers. The mass pollution probably occurred on January 29, 30 and 31 with a much diluted but continuing pipe pollution until February 7th. The engineers arrived on February 6th and within twenty-four hours the entire water system had been efficiently treated with the sulphate of copper. The bacteriological analyses of specimens collected on February 7th would naturally prove negative. This point will be referred to later as it was a matter of comment that bacteriological evidence was not furnished to the public.

Shellfish. The only other factor of serious consideration was the use of oysters. No other kind of shellfish had been in use. The oysters on sale were the so-called "tub" or "loose" oysters and were purchased from the local dealers as noted in the following table:

None used,	113
Allen Grocery only,	2
Blair & Holstein,	9
Blair & Holstein and Killian & Co.,	1
Graham's Grocery only,	6
Caldwell Grocery only,	2
Uber Grocery and Hanna Grocery,	1
Chew's, Blair & Holstein, and Killian & Co.,	2
Chew's and Killian & Co.,	16
Ross & Bennett Grocery,	2
Uber's Grocery,	4
Craig's Grocery only,	1
Craig and Uber,	1
Robins and Turk Grocery,	2
Hough Grocery only,	1
McCoy's Grocery,	1
Hart's Grocery only,	1
Unstated,	9

This table was compiled before the investigation was completed and about twenty-seven of the total number of cases are not included. When the table was submitted to you there was also reported a list of the wholesale shippers who had supplied the oysters in question and a summary of the information then at hand concerning the laboratory examination of certain samples of oysters. In this memorandum was included the following tentative statement regarding the relation of oysters to the epidemic at Grove City:—

“You will note that the *B. typhosus* was recovered from the oyster juice of J. W. Chew & Company, shipper, Baltimore, Maryland. The bacterial form obtained from the Parks, Wenzel & Company, Baltimore, Maryland supply, has not been definitely determined, but is probably a pathogenic form of the intermediate group.

“It should be noted that definite data as to whether or not oysters were eaten raw or cooked were not obtained except in the supply at the Girls’ Dormitory, which was, in part, from J. W. Chew & Company and, in part, from W. H. Killian & Company; these oysters were always cooked. This, of course, eliminated twenty cases from consideration.

“There is no evidence that oysters supplied prior to the explosive outbreak of February were the cause of illness in that borough.”

An abstract of the laboratory report and related data follows:—

OYSTERS—GROVE CITY.

Charged Against.	No. Cases.	Total Bac. per c.c.	B. Coli per c. c.	Pathogenic Form.
None used,	113			
Parks, Wenzel & Co., and J. W. Chew, Baltimore, Md.,	3			
J. W. Chew and W. H. Killian & Co., Baltimore, Md.,	20			
J. W. Chew, Baltimore, Md., only, ..	2	150,000	50	(Only cooked oysters from this supply). <i>B. typhosus</i> .
Parks, Wenzel & Co., Baltimore, Md., only,	4	2,700,000	250	Unidentified form probably <i>B. Paracoli</i> .
W. H. Killian & Co., Baltimore, Md., only,	21	80,000	15	Negative.
J. H. Byrd, Cresfield, Md., only,	2			No examination.
Unknown,	9			
	174			

Recapitulation:—

Cases using infected oysters (cooked),	20	
Cases using infected oysters (unstated),	9	
Cases using uninfected or unexamined oysters,	23	52
Cases not using oysters,		113
No data,		9
Total,		174

The figures obtained later after studying the total number of cases (201) did not alter the conclusion presented in this preliminary report, and it was still the opinion of your representative that oysters had not been the source of any one case.

Milk. The milk used by the patients came from the following dealers:—

Thompson,	7	Cribbe,	17
Thompson & Pringle,	1	Stone,	3
Pringle,	5	Campbell,	10
Pringle & Young,	1	Rulling Bros.,	4
Young,	16	Black,	1
S. Young,	6	Ramsey,	1
Young & Condensed,	1	Pearson,	4
Condensed,	4	Zellers,	2
Davis,	11	Jordan,	3
Davis & Nye,	1	Miller,	2
Nye,	10	Fryman,	1
Nye & Young,	1	Oxford Club,	1
Potter,	4	Wilson,	1
Hughes,	14	Platt,	2
Richardson,	17	Unstated,	4
McDowell,	3		
Hunter,	29		
Own Supply,	14	Total,	201

It cannot be shown that any cases of typhoid fever, primary or secondary, were traceable to the milk supply. Shortly after the arrival of Engineers Moses and Irwin it was recommended to the local Board of Health that the distribution of milk by bottles should be temporarily discontinued. This was immediately carried into effect and milk was sold directly from large containers and received in household containers set out by the patrons of the various dairies.

Ice Cream. The information regarding this possible source of infection is as follows:—

None used,	158	Curry's Grocery,	1
Christie's Restaurant,	1	Unstated,	18
Ormsby's,	2	Carnes,	1
Frisk's,	20		
			201

The use of ice cream, as of oysters and milk, gave negative evidence as its being a transmitting agent, and the use of other food stuffs was similarly negative.

DIAGNOSIS.

The difference of opinion on this point probably originated prior to November 22. Before the installation of air pressure, during the early part of November, a suction pump had been in temporary use. Lubricating oil found entrance to the water supply and the oil, while disagreeable in taste, did not cause gastrointestinal symptoms. Certain of the medical profession and the general public were, however, of the opinion that the outbreak of dysentery on November 22, 1913, and again on January 29, 1914, was due to this cause. This error was followed by differences of opinion as to the nature of the febrile disease which began to attract attention about February 17th.

The first cases were described in a letter from one physician, dated February 23, as "simulating typhoid fever but no cases with the characteristic symptoms." Another physician "considered it to

be a paratyphoid fever" did not report the cases, pending receipt of your opinion. Another physician criticized the Department for not making the water analyses public and one denied that the outbreak could be due to the water supply. Each had his following among the laity, including certain municipal officers.

For these reasons it was of paramount importance to establish a diagnosis of many cases and to meet the objection relative to the announced source of infection.

No difficulty was met in doing this work. The physician without exception cooperated in the work for which you detailed your medical representative. It was made possible to study upwards of half of the cases and to secure blood serum for studies of fifty-five cases. These studies were made between the first and sixth of March, at a time when most of the cases were in the second week of the disease. Variations of onset were studied in cases in the incipient stage and in those that had had continuous dysentery following an onset in the last days of January.

Clinically, the majority of cases presented the usual picture of typhoid fever. The difference in diagnosis probably arose in not eliminating the clinical symptoms and signs of acute dysentery in many cases in which these passed into those of typhus fever.

Blood sera from fifty-five cases and feces from three were studied by Dr. J. B. Rucker, Jr., in the Department's Laboratories. The blood sera in dilutions of 1:40 and higher (in positive cases) gave the following results:

Agglutination Reactions.

Positive:— <i>B. typhosus</i> only,	35
<i>B. typhosus</i> , <i>B.</i> and <i>paratyphosus</i> A. and <i>B. paracoli</i> , ..	2
<i>B. typhosus</i> and <i>B. paratyphosus</i> A.	2
<i>B. typhosus</i> and <i>B. enteritidis</i> ,	10
<i>B. paratyphosus</i> A. only,	1
	50

It is in harmony with both the clinical evidence and the serum reaction that an infection with *B. typhosus* predominated.

As is usual in water-borne typhoid outbreaks which are preceded by epidemics of dysentery, there was evidence of infection by other members of the typho-colon group. This was, however, much less marked than in previous epidemics studied by the Department.

The interesting feature was the occurrence of positive agglutinins for *B. enteritidis*. Studies with the several strains of *B. dysenteriae* in subacute cases gave negative results. These two findings harmonize with histories of dysentery cases as given by local physicians and the subacute cases studied by your representative. The evidence indicates that the dysentery cases suffered with markedly abrupt onsets, pain, nausea, and vomiting, prior to or coincident with liquid

movements of the bowels; and that intestinal hæmorrhage, prostration, and delayed convalescence were common. In other words, the syndrome was the expression of a rapidly absorbed toxin and not that of an endotoxin. For these reasons it is probable that a strain of *B. enteritidis* was the causative microorganism of the outbreak of dysentery at the end of January.

An investigation of the relation of dysentery and typhoid morbidity was made regarding patients having both infections and others exposed in the same premises. The tabulated results are as follows:—

Cases having both infections,	171	85.1 per cent.
Cases having typhoid fever only,	17	8.4 per cent.
No data,	13	6.5 per cent.
	201	

It was not possible to learn the number of subacute cases of dysentery but many having typhoid fever gave such a history.

The dysentery morbidity in the families in which typhoid subsequently developed totalled 547 cases. Excluding the fifteen families in which no data could be obtained, there were only twenty-two persons who escaped dysentery infection in premises subsequently housing cases of typhoid fever. This high morbidity rate (ninety-six per cent.) for dysentery indicates the large number of the total population, who must have been infected in the two wards in which the polluted water was distributed.

The three specimens of feces were negative for pathogenic bacteria. No attempt to recover pathogenic forms from water supplies was made because of the treatment for sterilization.

The mortality to May 1st is as follows:—

MORTALITY.

Name.	Address.	Date of Death.
1. Mrs. Harriet Thompson,	Grove City,	March 5
2. Gwendolyn Adams,	Grove City,	March 9
3. Geo. Peeler,	Grove City,	March 12
4. Mrs. Dora Rankin,	Grove City,	March 13
5. C. H. Robbins,	Grove City,	April 2
6. Chas. Glover,	Grove City,	March 29
7. Mildred Weller,	Grove City,	March 20
8. J. J. Conaway (college student),	Titusville,	March 8
9. Harry Borland (college student),	Harrisville,	Feb. 22
10. Grant Riddle (college student),	Irwin Twp., Venango Co.,	Feb. 16
11. Malcolm Runbaugh (college student),	Sharpsville,	April 3
12. Effie Harbison (college student),	Freeport,	April 5
13. Susie Long (college student),	Emblenton,	March 15
14. Mrs. Gertrude Powell (college student),	Grove City,	March 13
15. Rev. Mr. Thompson,	Grove City,	April 14
16. Margaret Meeklin,	Grove City,	April 20

Morbidity, 201—Mortality, 16 8.0 per cent.

Of these fourteen had suffered with acute dysentery from which they had not recovered before the appearance of clinical evidence of typhoid fever.

MANAGEMENT.

Engineering. The special report of the abatement of the source of the infection, treatment of water supplies and the control of the milk supply is submitted by the Engineering Division.

Board of Health. The local Board felt that under the circumstances their action was limited. The usual placarding of premises was carried out as soon as reports of cases were filed. Circulars of instruction were not ordinarily distributed nor was verbal notice of preventive measures given. It has been customary to depend upon physicians for such instructions. A meeting of the Board was held on March 5th. This was attended by various officers of the borough government, physicians, and others. The work performed by your representatives and the relation of cause and effect were detailed in response to requests for such information.

Hospital. The hospital in the borough having a normal capacity of not over twenty was efficiently administered by Miss Blanche Fleming, Superintendent, with an average of between thirty and forty patients. The organization of an Emergency Hospital was considered by three bodies, the Board of Hospital Managers, the Civic Committee of the Commercial Club, and the Ladies Hospital Auxiliary. By request, your representative met with the first named on March 3 and 5 and the last on March 4. Because of the rapidly diminishing reports of new cases and the estimate of a continuance of the epidemic, both organizations were advised that the opening of another hospital would be unnecessary. It was further pointed out that economic conditions did not warrant the expenditure of money, which by reason of the location and transportation would make the per capita cost far in excess of the usual Emergency Expense. It was advised that a District Nurse Service would furnish adequate assistance to all who needed it and could be administered by Miss Fleming. This method was adopted.

The College. By request of Dr. A. T. Ormond, President of Grove City College, a description of the source of the infection and its abatement together with a statement concerning the outlook was made in Chapel on March 3.

As all problems of a medical and administrative nature had been adjusted, I withdrew by your instructions on March 6.

REPORT OF AN INVESTIGATION REGARDING THE PREVALENCE OF TYPHOID FEVER IN NEW HOLLAND.

In accordance with your instructions I proceeded to New Holland, Lancaster County, on February 5, 1914, in order to investigate the conditions causing the unusual prevalence of typhoid fever in that borough and vicinity. An earlier investigation had been made by Dr. J. L. Mowery, County Medical Inspector, who accompanied me in performing the work here reported.

The census and the collection of water samples were made under the direction of Assistant Engineer M. E. Shaughnessy, assisted by Sanitary Inspector H. A. Miller, and Health Officer H. B. Slack, District No. 539. Much information was furnished by the Board of Health of New Holland Borough. The officers of this Board are E. H. Burkholder, President, P. D. Hess, Secretary, and John Mentzer, Health Officer.

New Holland Borough is a centre for the surrounding townships of Lancaster County. The occurrence of cases of typhoid fever during every month of the year was a matter of concern to the Board of Health.

During the year 1913 and in January 1914 fifty-six cases had been reported in the district in which cases were traced. It was not possible or necessary to investigate all and this report is based on studies of forty-eight cases, for which a census was made. Of these, twenty-five developed the disease during 1913 and twenty-three during January, 1914.

New Holland Borough,	4	Upper Leacock Township,	4
Earl Township,	7	Ephrata Township,	2
West Earl Township,	7	Salisbury Township,	5
East Earl Township,	5	Caernarvon Township,	3
Leacock Township,	11		—
			48

The wide distribution of the cases excluded a factor common to the group unless the infection was acquired in some centre such as New Holland Borough or by transportation to them.

The use of a common transmitting agent in New Holland was possible but was readily excluded in the negative history obtained by our census. Even a small group could not be traced to ice cream, local water, or foods in the Borough. The latter had a population of 1,106 in 1910 and this has probably been increased. The occurrence of four cases in the Borough was not found to be traceable to a local factor.

The data obtained by census, when tabulated, gave the following results:

USE OF WATER.

Own dug well and Reading,	1 case.
Own dug well and Ephrata,	1 case.
Own dug well and New Holland Public Supply,	8 cases.
Own dug well and Lancaster,	4 cases.
Own dug well only,	16 cases.
Own drilled well and Lancaster,	2 cases.
Own drilled well and spring,	1 case.
Artesian well and New Holland Public Supply,	1 case.
Spring and own dug well,	3 cases.
Spring and Ephrata,	1 case.
Spring and own well,	1 case.
Spring and cistern,	1 case.
Spring only,	3 cases.
Cistern,	1 case.
Various,	4 cases.
	48 cases.

Water was excluded from consideration by the distribution of cases and the great variety of the sources of water supply.

USE OF MILK.

Purchased from five sources,	9 cases.
Own supply only,	36 cases.
Various,	1 case.
None used,	2 cases.
	48 cases.

No typhoid fever was reported on the premises of the five sources of milk for the nine cases.

Ice cream, ice, and uncooked foods were excluded by similar evidence.

The time of the year and the low temperature excluded flies.

The use of oysters was, however, common to a large number of cases. This is shown in the Case Tabulation following:

RELATION OF OYSTERS TO THE CASES STUDIED.

Sources of Supply.		Case No.	Onset.	Age.	Sex.
Wholesaler.	Retailer.				
H. C. Ellis,	No. 1	5	December 12, 1913,	15	M.
	No. 2	28	January 11, 1914,	32	M.
W. H. Price,	No. 3	3	December 2, 1913,	40	M.
		19	January 5, 1914,	36	M.
	No. 4	32-d	January 20, 1914,	9	F.
		34-d	January 20, 1914,	4	M.
		35-d	January 23, 1914,	6	F.
No. 5	6	December 17, 1913,	52	F.	
	11-d	December 21, 1913,	27	F.	

Sources of Supply.		Case No.	Onset.	Age.	Sex.
Wholesaler.	Retailer.				
	No. 6	8	November 26, 1913,	25	M.
		11-d	December 21, 1913,	27	F.
		12	December 29, 1913,	18	F.
		14	January 1, 1914,	21	F.
		15	January 2, 1914,	22	M.
		17-d	January 1, 1914,	23	M.
		20	January 1, 1914,	19	M.
		22-d	January 5, 1914,	21	M.
		23-d	January 7, 1914,	41	M.
		33	January 17, 1914,	16	F.
Wm. Krouse,	No. 7	9	December 26, 1913,	30	F.
Stockton, Md.		10	December 26, 1913,	20	M.
		13	December 27, 1913,	9	F.
		24	January 7, 1914,	27	M.
		20	January 13, 1914,	13	M.
J. T. Merrill,	No. 8	16	January 5, 1914,	14	M.
Franklin City, Md.	No. 9	31	January 13, 1914,	40	F.
T. F. Disbaroon,	No. 10	17-d	January 1, 1914,	23	M.
Stockton, Md.		25-d	January 8, 1914,	26	M.
	No. 4	32-d	January 16, 1914,	9	F.
		34-d	January 20, 1914,	4	M.
		35-d	January 23, 1914,	6	F.
I. J. Hancock,	No. 10	17-d	January 1, 1914,	23	M.
Stockton, Md.		25-d	January 8, 1914,	26	M.
J. H. Toole,	Bought direct	21	January 7, 1914,	11	M.
Stockton, Md.		27	January 8, 1914,	21	M.
		29	January 13, 1914,	9	M.
Unknown,	No. 11	7	December 22, 1913,	25	M.
Franklin City, Va.	No. 12	18	January 6, 1914,	19	F.
	No. 13	26	January 7, 1914,	14	M.
	No. 14	22-d	January 5, 1914,	21	M.
		23-d	January 7, 1914,	41	M.
All use of oysters denied,		1	May 1, 1913,	48	F.
		2	November 25, 1913,	18	M.
		4	December 6, 1913,	25	F.
Unverified data, or no history regarding oysters,		36	September 20, 1913,	40	M.
		37	January 20, 1914,	18	F.
		38	April 4, 1913,	11	M.
		39	April 6, 1913,	20	F.
		40	April 7, 1913,	7	F.
		41	April 7, 1913,	26	M.
		42	May 20, 1913,	26	F.
		43	June 3, 1913,	20	M.
		44	July 2, 1913,	38	M.
		45	July 2, 1913,	21	F.
		46	July 3, 1913,	19	F.
		47	July 6, 1913,	17	F.
		48	? ? 1913,	34	F.
		*49	January 11, 1914,	38	M.

d-Duplicate.

*Not included in the census.

USE OF OYSTERS.

Cases using oysters from Stockton, Md.,	25
Cases using oysters from Franklin City, Va.,	7
Cases using oysters from both points,	0
Cases using no oysters,	3
Cases with history of use undetermined,	14

49

The oyster beds which were the sources of the suspected supply are said to be but three miles apart, located on the Eastern Shore of Maryland and Virginia. All beds are in the Chincoteague Bay (on the branch of the P. B. & W. R. R. from Harrington, Delaware). This line terminates at Franklin City after passing through Stockton, Maryland.

Of the seven wholesale dealers referred to in the above table, four are said to operate their own beds, namely: H. C. Ellis, Franklin City, Va., M. H. Price, Stockton, Md., T. F. Disbaroon, Stockton, Md., and I. J. Hancock, Stockton, Md. Information was not obtained relative to J. T. Merrill, William Krouse, J. H. Toole, and the unnamed dealer.

With the thought in mind that the oysters may have been infected by feeding with a polluted water, subsequent to their arrival in Lancaster County, the retailers were visited and the following information procured:

Dealer No. 2, of Salisbury, a saddler, handled twenty-one barrels of oysters during the holidays, wholesale, by the barrel, and retail, by the hundred. Barrel lots were sold to the following.

John G. Diller, Ledger,	1 barrel.
Martin Eby, Gap,	- 1 barrel.
Benjamin Blank, Gap,	*2 barrels.
J. J. Shirk, Gap,	1 barrel.
C. U. Stoltzfus, Gap,	1 barrel.
Solomon Stoltzfus, Gap,	1 barrel.
J. W. Martin, Gap,	$\frac{1}{2}$ barrel.
Robert Baldwin, Hanes,	*2 barrels.
Coleman Kurtz, Hanes,	1 barrel.
Samuel Kannon, Hanes,	1 barrel.

*Blank and Baldwin sold these by retail.

which would leave nine and a half barrels that he sold by the hundred. He did not float these oysters.

Dealer No. 3, of Bareville, Lancaster County, buys oysters of W. H. Price, Stockton, Md. He had from ten to twelve barrels before Christmas, culls, and because sales were slow he fed them corn meal, salt, and water.

Dealer No. 4, of Gordonville, handled 200,000 oysters, bought from H. C. Ellis, a planter and shipper of Franklin City, Va., and from T. F. Disbaroon, Stockton, Md., getting from eight to ten barrels a week, received Tuesday and Friday. He does not float them in any manner; they cost about \$2.00 a barrel for culls, and about seventy-five cents a hundred for primes.

Dealer No. 6, of Vogansville, has sold about forty barrels of oysters in the holiday time, not only in barrel lots but by the hundred. He never floated them. He purchased direct from W. H. Price, Stockton, Md. at \$2.00 a barrel plus sixty cents freight. He sold a barrel to Daniel and Edwin Hoover, David Newswanger, Walter and Milton Esslinger.

Dealer No. 7, of Cedar Lane, buys oysters from William Krouse, Stockton, Md. He does not float or feed his oysters.

Dealer No. 8, father of Oscar Thomas, of Beartown, buys oysters from J. T. Merrill & Son, dealers in oysters of Franklin City, Va. He does not feed or float his oysters.

Dealer No. 9 buys all his oysters from J. T. Merrill & Son. He uses only primes costing \$3.00 a barrel plus sixty cents freight. He

does not float oysters but turns barrel on head so that the brine in the bottom of the barrel may flow back over the oysters. He buys but one barrel at a time.

Dealer No. 10, of Early Township, Lancaster County, buys entirely from T. F. Disbaroon, of Stockton, Md., and the week before Christmas he bought a carload of one hundred and fifty barrels, one third being primes costing \$3.25 a barrel and the balance were culls which cost \$2.00 a barrel. The culls average from six hundred to nine hundred to the barrel. At other times he handles from ten to fifteen barrels a week—the quantity depending upon the weather. He feeds corn meal, salt and water. The water is taken from a well in the barnyard, a sample of which was taken February 18, 1914. At that time the old wooden stock was worn out. A coal scuttle, a wooden bucket, a sprinkling can, are left filled with water, all upon a filthy wooden and leaking pump floor. Chickens were roosting on these vessels. The contents of the coal scuttle were poured down the old pump stock to "get it started"; then the water was pumped off to "get the fresh water."

Dealer No. 11, restaurant keeper in Ephrata Borough, sold oysters to Jacob Messmer, which were bought from F. Mettitt & Brothers, Lancaster, who bought in part from Franklin City. He handles about three barrels a week and gets them by the barrel as he uses them. Whether Messmer bought shell or shucked oysters was not stated.

Dealer No. 12 purchased a barrel direct from T. F. Disbaroon, Stockton, Md., for his own use at \$2.20 a barrel plus sixty cents freight.

Dealer No. 13, who sold oysters to Wenger Groff in Earl Township, obtains his oysters from H. C. Ellis, Franklin City, Va., and sold fourteen barrels to different parties about two weeks before Christmas. They were never floated while in his possession.

Dealer No. 15, of Gordonville, buys only culls from T. F. Disbaroon, Stockton, Md., and retails them at sales. They cost \$2.00 a barrel plus freight; he never feeds his oysters but wets a bag and places it over the barrel.

Dealer No. 16, Gordonville, buys only culls from T. F. Merrill and Son, Franklin City, Va., which cost him \$2.00 a barrel, plus freight. He never carries a large stock, but frequently throws water over them from the well in front of Levi Lauch's Hotel in Gordonville, where a sample was taken on February 12, 1914.

Dealer No. 17, of Bareville, buys Morris River Cove oysters from Col. J. E. Yeats, of Bivalve, N. J. After J. E. Myers was taken sick he bought oysters from N. S. Groff.

Dealers (15), (16), and (17), had no patients on route (corrected to March 7th). No investigations of Dealers (1), (5), and (14) were made.

The use of water for feeding, as is noted above, is not practised except in a few instances; in these the analysis of the water supply made at the time of investigation was negative. Small size carloads had been purchased by two dealers but no cases of typhoid fever were traced to these carload lots. The oysters purchased were of the cheapest grades and all purchased from beds in one locality.

Amos Detrick, whose sales included the largest number of cases, had not used water except from a well on his own premises; this water is in constant use for drinking purposes by his own family and other residents in Vogansville. It should also be noted that oysters sold by hucksters and other dealers were always sold in the shell and that contamination with polluted water used for "floating" would not be a menace in this particular outbreak.

The following exceptions to the oyster infection are to be noted:

Exception 1. Case 11 was a direct contact employed on the premises of Case 1 who was taken ill with typhoid fever on May 1, 1913. Case 1 suffered with phlebitis during convalescence and there is reason to believe that she was a carrier for some period following her recovery from the disease. No laboratory studies were permitted.

Exception 2. In the family of Cases 32 and 35, Case 36, the father, had developed typhoid fever on September 20, 1913. At the time it was believed that his case was secondary to another member of the family who had had the disease some eighteen months previously. Following his illness, Cases 32 and 35 became ill on January 20 and 23, 1914, respectively. On the same date, Case 37, aged one year and seven months, was taken ill but was diagnosed as "catarrhal disease," died and was buried on February 6. A brother of Case 36, Case 34, resided on the second neighboring farm and visits were frequently exchanged, particularly at the time of the illness. A child of Case 34 became ill on January 20. Among other visitors to the premises was Case 49, who developed the disease on January 11, 1914 and who at the time was living on the Gillerbortz farm now occupied by Harry Bean. Secondary to the case of Case 49 but subsequent to his removal occurred Case 33, whose onset was January 17, 1914.

At the time of the preliminary investigation by the County Medical Inspector, the analyses of the water at Beiler's School, which was in use by those in the immediate neighborhood, showed large numbers of B. Coli. It was not shown, however, that cases were directly traceable to water supply used in this school.

Exception 3. The line of contact which led to the ready transmission of the disease is noted in the history of cases occurring in the family of Harry Myers and others. These are not included in the cases for which a census was made, nor is the disease traceable to oyster transmission but is presented in order to show by what

means the endemicity of the disease in such a section may in part be maintained. In the family of Harry Myers there occurred the following cases:

Case 38, aged 11; Case 39, aged 20; Case 40, aged 7; and Case 41, aged 26, the onsets of all occurring between April 4 and 7, 1913. The immediate source was not discovered although there is reason to believe that the infection was water-borne. The trained nurse in charge of the cases was Case 42, a resident of Leacock Township. She finished her work, returning to her home on May 10. She showed the early symptoms of typhoid fever on May 20. Two weeks after her return, her brother, Case 43, developed the disease and on July 2, a brother-in-law, Case 44, living in the same house, became ill. On July 3, her sisters, Case 45, aged twenty-one, and Case 46, aged nineteen, were taken ill. On July 6, Case 47, aged seventeen, became ill. Somewhat later, her sister, Case 48, developed the disease.

It would seem that contact and infected foods, particularly oysters, account for the morbidity herewith detailed. No factor other than oysters was found for thirty-two cases. These were handled in Pennsylvania in such a way as to make it appear that the infection occurred at the points of collection.

The investigation was not extended beyond the boundaries of the State.

REPORT OF AN INSPECTION RELATIVE TO THE PRESENCE OF TYPHOID FEVER IN SCOTTDALE.*

In accordance with instructions issued by you, I proceeded to Scottdale, Westmoreland County, on August 12, 1914, in order to review the circumstances relative to typhoid fever morbidity in that Borough.

The investigation of cases reported before August 13th and of the water supplies to the Borough had been made by Assistant Engineer S. R. Parke, Jr.

It had been alleged by representatives of the Citizens Water Company that the disease in question was not typhoid fever and that errors were being made in diagnosis.

Eight cases were studied, those selected being, for the most part, cases in which the diagnosis had been questioned. All presented the

*Other information concerning this outbreak and the endeavor to determine its origin forms section 29 of the report of the Division of Sanitary Engineering.

clinical picture of typhoid fever. The onsets varied between fifteen and thirty days prior to the visit of your representative. Blood collected from five cases gave the following agglutination reactions:

Case No.	B. Typhosus.	B. paratyphosus B.	B. paracoli.	B. enteritidis.
9,	Negative.....	Negative.....	Positive.....	Negative.....
13,	Positive.....	Negative.....	Negative.....	Positive.....
14,	Negative.....	Negative.....	Negative.....	Negative.....
18,	Positive.....	Positive.....	Negative.....	Negative.....
21,	Positive.....	Negative.....	Negative.....	Negative.....

Case 14 whose blood serum was negative in one examination with all the forms noted above, was seen about four weeks after the onset and presented every feature of mild typhoid fever. Case 9 was seen forty days after onset and was still confined to bed, but convalescent; the history and the temperature record confirmed the diagnosis made by the attending physician.

Of the twenty-one cases reported up to August 13th, eight were studied and were undoubtedly infections by *B. typhosus* or allied pathogenic members of the typho-colon group. In all probability more than one pathogenic form was responsible and in conformity with the regulations of the Department, persons so infected had been reported as typhoid fever. Since this occurs more commonly by means of water transmission than by other means of transmission, the source of the outbreak was to that extent determined. A detailed study of data obtained by Assistant Engineer Parke was made in the field. This was supplemented by reports furnished by the Citizens Water Company and the Scottsdale Board of Health. No method of transmission other than water could be discovered. The report of the Engineering Division is confirmed in all details relating to the epidemiological diagnosis.

REPORT ON A MILK-BORNE EPIDEMIC OF TYPHOID FEVER AT WARREN.

Pursuant to your request of recent date I submit the following report of an epidemic of typhoid fever in Warren Borough in 1914, July to November inclusive.

Warren Borough, an industrial and residential town of 14,500 estimated population, is situated at the confluence of the Allegheny

River and Conewango Creek, streams of considerable size which divide the town into three sections known respectively as the East, West, and South Sides. The chief industries are oil refining, tanning, and the allied wood trades. The general sanitary conditions are good, a lively spirit of civic pride and endeavor prevails and the town wears an aspect of general prosperity. Insanitary domiciles are few.

The public water supply is furnished by the Warren Water Co., owned and operated by the American Water Works and Electric Co. The daily consumption is a million gallons and is obtained from two sources, viz., by impounding Morrison Run and from the Allegheny River. The same equipment filters both supplies. An alum coagulant is used followed by sedimentation for two hours and a half. The filters are of the rapid sand filtration type and are rendering satisfactory service. During the winter months when the Morrison Run supply is sufficient, which is ordinarily the case, this water is quite constantly used and for weeks serves as the sole source of supply. With the onset of the dry season resort must be had to the river water as a sole or partial supply depending upon the amount of precipitation. The results of the daily analyses made in the laboratory of the Water Company are filed in the office of the Board of Health at the end of each week. These records show a satisfactory filter efficiency for many months prior to the epidemic. Agar plates for the count and lactose-bile tubes for *B. Coli* are used exclusively in these tests. As a precautionary measure hypochlorite of lime was used between August 28th and October 26th.

Apart from that portion of the Sixth Ward annexed from Glade Township in 1913 the borough is well provided with sewers which discharge their untreated contents into the Allegheny River. It is noteworthy that the unsewered parts of the town were relatively exempt from the disease, nine tenths of the cases occurring in sewerred portions.

Prevalence: Fairly reliable data are available as to the typhoid morbidity in previous years.

TYPHOID FEVER IN WARREN BOROUGH.

	Cases.	Deaths.
*1901,	24	3
*1902,	29	1
*1903,	21	2
*1904,	26	3
*1905,	16	2
*1906,	20	2
*1907,	29	3
*1908,	35	6
†1909,	14	2
†1910,	10	0
†1911,	10	0
†1912,	10	0
†1913,	26	2
	270	19
Residents known to have been infected abroad 1901 to 1908 inclusive,	28	
	242	

Approximate average annual morbidity (cases), = 18.6.

*Indicates inclusion of residents known to have been infected abroad.

†Indicates exclusion of residents known to have been infected abroad.

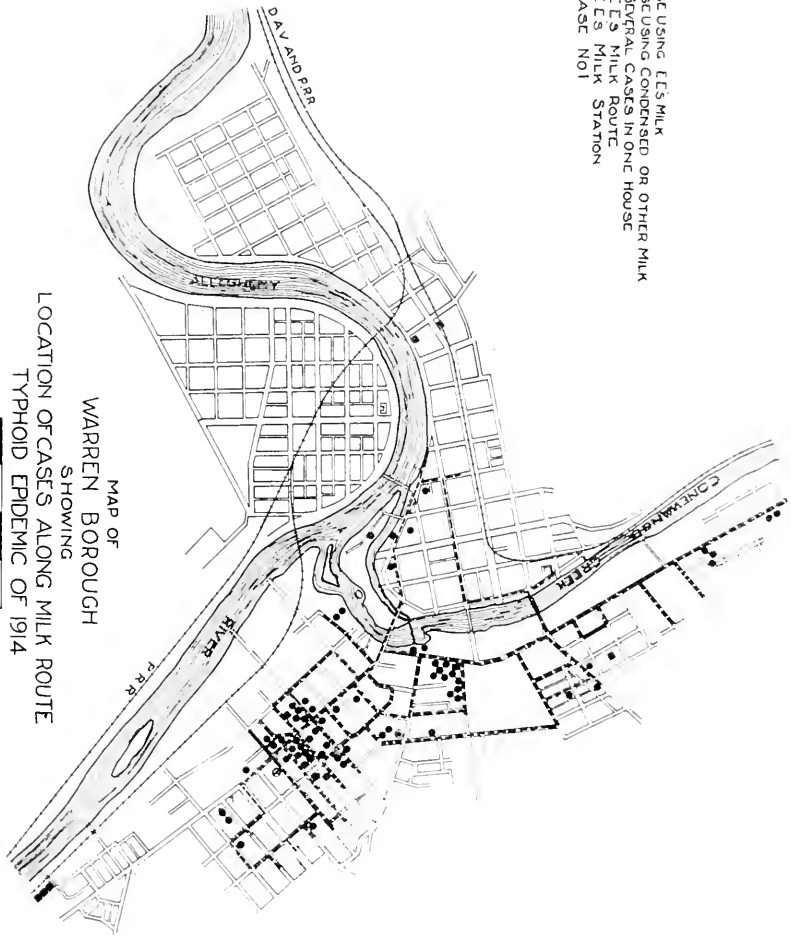
Epidemiology. The first intimation that an event of unusual importance had occurred in the development of typhoid fever in Warren was on the 24th of August when on inquiry I learned that an excessive number of admissions to the Warren Emergency Hospital had been made or were in prospect. The practising physicians of the town were promptly interviewed with the result that within the next twenty-four hours it became apparent that twenty-three persons had sickened since August 1st of a febrile disease strongly suggestive of typhoid fever. As usual the diagnosis had been held in reserve in many cases. A preliminary census made at this time directed attention to the uniformity with which users of the product supplied from a local milk-station, conducted by E. E., were stricken with the disease. On the morning of August 26th I communicated my findings to the President of the Board of Health, Mr. T. M. Greenland, who ordered immediate suspension of sale of the product of the vendor in question and the nine dairymen supplying him, pending further investigation, which action was confirmed at a meeting of the Board held on the evening of the same day. In response to an appeal to the State Department of Health the Associate Chief Medical Inspector, Mr. S. R. Parke, Jr., of the Division of Sanitary Engineering, and Mr. J. S. Couch, Sanitary Inspector arrived on the morning of August 28th. An independent survey and census of thirty cases by these officials on August 28th and 29th confirmed the earlier findings. Dr. Hunt and Mr. Parke after rendering invaluable service departed on the evening of August 29th.

Distribution: The localization of cases in the adjoining Fifth, Sixth and Eighth Wards of the East Side and the western littoral of the Conewango Creek was one of the striking features of the epidemic. Examination of the map will enable the reader to visualize quite clearly the coincidence of cases with the route traversed by E. E. Five non-users of the E. E. milk in four houses resided well outside of the limits of the main group and are regarded as sporadic cases.

Character of the Epidemic: The epidemic lacked the explosive character so often observed in water-borne infections. A very considerable number gave a history of the sudden onset of definite symptoms which as a rule mark milk-borne infection.

Clinical course: There was unanimity of opinion among the local physicians as to the nature of the prevailing disease. The cases generally presented in a typical way the usual clinical features of typhoid fever. Blood samples from a considerable proportion of patients were submitted to the Widal test and a large proportion of the specimens examined were reported to give a positive reaction with the typhoid organism.

- CASE USING E'S MILK
- CASE USING CONDENSED OR OTHER MILK
- ▣ SEVERAL CASES IN ONE HOUSE
- E'S MILK ROUTE
- E'S MILK STATION
- CASE NO 1



MAP OF
WARREN BOROUGH
SHOWING
LOCATION OF CASES ALONG MILK ROUTE
TYPHOID EPIDEMIC OF 1914



DATES OF ONSET.

		Case			Case
July	1st, 1914,.....	1	†August	26th, 1914,.....	1
August	2nd, 1914,.....	2	August	27th, 1914,.....	2
August	4th, 1914,.....	2	August	28th, 1914,.....	1
August	7th, 1914,.....	1	September	2nd, 1914,.....	1
August	9th, 1914,.....	1	September	4th, 1914,.....	1
August	10th, 1914,.....	3	September	7th, 1914,.....	1
August	11th, 1914,.....	5	September	12th, 1914,.....	1
August	12th, 1914,.....	1	September	15th, 1914,.....	1
August	13th, 1914,.....	1	September	17th, 1914,.....	1
August	14th, 1914,.....	1	October	1st, 1914,.....	3
August	16th, 1914,.....	5	October	6th, 1914,.....	1
*August	17th, 1914,.....	4	October	7th, 1914,.....	1
August	18th, 1914,.....	5	October	9th, 1914,.....	1
August	19th, 1914,.....	2	October	12th, 1914,.....	3
August	20th, 1914,.....	4	October	15th, 1914,.....	1
August	21st, 1914,.....	4	October	23rd, 1914,.....	1
August	22nd, 1914,.....	3	October	26th, 1914,.....	1
August	23rd, 1914,.....	1	November	10th, 1914,.....	2
August	24th, 1914,.....	1			

*Date of onset of helper in infected milk station.

†Dairy closed.

Location of Cases By Wards.

Second Ward,	4 cases.	§Sixth Ward,	32 cases.
Third Ward,	1 case.	§Eighth Ward,	10 cases.
¶Fourth Ward,	2 cases.	‡Not Warren,	1 case.
§Fifth Ward,	21 cases.		
			71 cases.

(*) Non-users of infected milk.

(†) This is the only known out-of-town case, exclusive of Case No. 2 which was treated in Jamestown, N. Y. The former was treated in the Warren Emergency Hospital. The latter was credited to the Sixth Ward where he resided at the time of probable infection. Both used the infected milk.

(§) Adjacent Wards.

Distribution By Houses.

1 house had	5 cases.
2 houses had	3 cases each.
8 houses had	2 cases each.
*45 houses had	1 case.

Total houses; 56

Total population of above households, 266

(*) Including one out-of-town case probably infected in Warren Borough.

Use of Water.

Used city water solely,	7
Used city water principally,	23
Used city water occasionally,	19 49
Used Thomas well water, corner Conewango Ave. and Jefferson St.,	11
Used Miller well water, No. 16 South St.,	4

Use of Water—Continued.

Used —— well water, No. 10 South St.,	3
Used Hammond Iron Works well,	3
Used Thomas Well, Jackson St.,	2
Used Punskey well, No. 14 South Carver St.,	3
Used well in Connecticut Ave.,	2
Used well No. 120 Oak St.,	2
Used well in Folkman Block,	2
Used well corner Carver St. and Pennsylvania Ave.,	2
Used well at Seneca Oil Works,	2
Used well of Sanford, No. 211 Prospect St.,	2
Used well of Giegerich, No. 305 Beech St.,	2
Used well at No. 1211 Pennsylvania Ave., East,	2
Used spring in Connecticut Ave.,	2
Used Crystal Cray water,	2
Used Allegheny Springs water,	2

Apart from the seven using only the public supply, but including the above private sources furnishing water to two or more patients each, we have a balance of sixty-four patients who had used water from seventeen different private and public sources of supply.

Use of Ice.

Not used,	40	Artificial Ice Co.,	22	Phillips Ice Co.,	9
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Use of Ice Cream.

I. X. L. only,	41
I. K. L. and O. K.,	16
O. K. only,	2
Various out-of-town sources,	3
Not used,	19
	71

Used as cones, 10.

Use of Shell-fish.

Local oyster house,	4	Not used,	67
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Use of Vegetables and Fruits (uncooked).

Home garden,	(8 sources),	12	Fruits,	6
Grocery,		4	Not stated,	1
Market,		4	Not used,	44

Use of Milk.

Supplied by E. E. Milk Station solely,	25
Supplied by E. E. Milk Station principally,	22
Supplied by E. E. Milk Station occasionally,	10
*Supplied by Dairyman T. R.,	2
Used condensed milk only,	3
Others not using E. E. milk,	9
	14
	71

*In part purchased from E. E.

Cases by Age and Sex.

Age.	Males.	Females.	Total.
3 yrs.,	0	2	2
4 yrs.,	1	2	3
5 to 9,	4	7	11
10 to 14,	4	4	8
15 to 19,	2	6	8
20 to 24,	6	5	11
25 to 29,	4	3	7
30 to 34,	4	1	5
35 to 39,	1	1	2
40 to 44,	1	4	5
45 to 49,	1	3	4
50 +	3	2	5
	31	40	71

Occupation

Professional ball players,	2
Lineman,	1
Chauffeur and garage employees,	3
Street railway conductor,	1
Washerwoman,	1
Milk station helper,	1
Waitress (tea room),	1
Confectioner's clerk,	1
Butcher,	1
Grocery clerk,	1
Machinist,	1
Bank clerk,	1
Drygoods clerk,	1
Postal clerk,	1
Merchant,	1
Superintendent Axe Works,	1
Telephone operator,	1
Stenographer,	1
Silkmill worker,	1
Dressmaker,	1
Laborer,	5
Boilermaker,	2
Housewife,	14
No occupation,	27
	71

Secondary cases and Contacts: Five cases fall into this group. The circumstance that thirty one of these patients or forty-four per cent. were treated in the Hospital is regarded as an important factor in limiting the spread. The remaining forty were cared for in their homes, for the most part under the care of non-professional nurses.

Sex and Occupation: The disease was somewhat more prevalent among females to the number of forty cases, or fifty-six per cent., which taken in connection with the fact that forty-one, or fifty-eight per cent., spent most of their time at home furnished added reasons to suspect milk of being the distributor of infection.

Uncooked Vegetables and Fruits, Ice and Shellfish: Our impression is that vegetables and fruits took little part in the epidemic. Forty patients, or fifty-six per cent., gave a history of having used no ice whatever. The Artificial Ice Co.'s product is manufactured from distilled water obtained from a private source of undoubted purity as confirmed by analyses made at the time of the epidemic. The fact that sixty-seven had not partaken of shellfish obviously negatives infection from this source. The epidemic was well under way before the opening of the oyster season in Warren.

Ice Cream: Fifty-seven, or four-fifths of the patients, had at some time or other used ice cream manufactured by the I. X. L. a local concern with a very large output. This company's product is very extensively used in Warren and is manufactured from pasteurized cream as is also the O. K. article. Nineteen persons, or twenty-seven per cent., had used no ice cream whatever.

Well Water: Apart from the well at No. 126 Conewango Ave. there did not appear to be any unusual grouping of cases about any such private source of supply. Eleven patients had used water from this well which tested as follows:

Count in 1 c. c.	Count in 10 c. c.	Lactose-bile gas test in 1 c. c.	Lactose-bile gas test in 10 c. c.
65	350	10%	50%

Milk: Fifty-seven or four-fifths gave a history of having used milk from the E. E. milk-station in sufficient quantity to account for the infection. Two others had used the product of T. R., a dairyman vendor who purchased a part of his supply from E. E., but it could not be established that they had received the E. E. milk. The remaining twelve patients gave a definite history of not using the product distributed by E. E. Four of the latter had used water from the well at No. 126 Conewango Ave. and five others resided well beyond the limits of the E. E. milk-route.

Milk-station of E. E. This owner of a milk-station located in the Sixth Ward is supplied by nine dairymen to the amount of 450 quarts of milk and cream daily which he sells to 240 customers, the great bulk of his trade being confined to private families residing in the Fifth, Sixth, and Eighth Wards or what is popularly known as the "East Side." He also sells some seventy quarts to five eating places and restaurants and to five private families on the west side of the town. With the exception of thirty-five quarts of bottled milk which

he purchases from a dairyman located just outside the borough limits, all the milk which he sells is mixed and not separable as to source after receipt. The bulk of his trade is in bottled milk in which work he is assisted by H. M., age fourteen, who also washes the bottles. This lad sickened with typhoid fever in the third week of August, twenty-four days after the date of onset of Case No. 2. The corrected date of onset of H. M. places him as No. 26 in the list. It is improbable that he was at work during the febrile stage of the disease for on August 17th, the date of corrected onset, he was well enough to make a visit of a week to a neighboring city. He returned feeling ill and in consequence did not go to work again. From the foregoing circumstances it is improbable that he initiated the epidemic but rather is he to be regarded as a victim of the milk purchased by E. E. To what extent he was responsible for subsequent cases is problematical. The agglutination test was positive in his case.

As soon as it became evident that the epidemic was milk-borne an inspection of the nine dairymen supplying E. E. was made by me and again by Dr. Hunt on August 28th without, however, disclosing any suspicious febrile or diarrhoeal disease in the families of the dairymen or among their hired help.

The probability of carrier-infection was next considered. Four visitors to the dairy of A. Y. in mid-July and two milkers in the dairies of L. M. H. and M. M. said to have had typhoid fever in previous years were subjected to the usual tests but all reacted negatively.

Forty-four other dairies supplying residents of Warren were inspected between the first and the ninth of September with the result that fourteen had their licenses revoked by the Board of Health and three others were given five days in which to complete changes satisfactory to the Board. Copies of reports of these inspections have been filed with the State Department of Health.

Summary and Conclusions: It did not appear that these patients had any considerable social ties as a group nor had they partaken of food or drink at any public or private function. Indeed there was a destitution of evidence in this respect. The regional distribution, the coincidence of cases on the milk route of E. E., the lack of any explosive character of the epidemic, the preponderance of cases among housewives and children, the relative purity of public and private water supplies as shown by tests previous to and during the continuance of the epidemic, the virtual elimination of all other food stuffs and drink, adequately sustain the assumption of milk-borne infection.

The mode of conveyance of the infective agent remains to be considered. The lack of an explosive character as shown by the consecutive trend of onsets assuming more or less of a desultory aspect, the

relative paucity of patients to the number of users of the particular product under suspicion, awaken a justifiable doubt as to the probability of bulk-infection such as for instance contamination of one of the cans of milk supplied to E. E. This finds further partial confirmation in the absence of a suspect or carrier in the dairies supplying the vendor.

In view of the foregoing the epidemiological picture of bottle-infection is discernible and indeed offers the most acceptable solution of the escape of the infection and its subsequent distribution. In this relation Case No. 1, sickening in the first week of July about thirty days before the onset of Case No. 2 of the main group, would fulfill the requirement in point of priority to the later cases. The patient was treated in the local hospital between July 10th and 24th, returning to his home on the latter date. The premises were fumigated but no time was given for the placing of quarantine owing to his removal before the diagnosis was definitely made by the physician in charge. He was not a patron of the E. E. milk route nor could it be established that the latter had collected bottles from the premises of Case No. 1. The evidence, however, in this respect is inconclusive. It did appear that promptly on his return from the hospital on August 24th an extra supply of milk was purchased from unidentified passing vendors and E. E. may have been one of these. This was some ten days before the corrected date of onset of Case No. 2, a relatively short incubation period for the latter.

The practice among dairymen of purchasing milk and cream *en route* in case of shortage is well known and offers ample opportunity for the interchange of bottles apart from the normal exchange incident to the conduct of any dairy business. It is not improbable that three cases giving a history of non-use of the E. E. product were thus infected. With the exception of one dairyman, whose product was not under suspicion, sterilization of bottles was not required or practised by the milk dealers of Warren, thus affording opportunity for the survival of the virus of this disease.

Examination of the dates of onsets of cases No. 1 to No. 57 inclusive permits the erection of a main group, allowing twenty-five days from the date of closure of the milk-depot of E. E., on August 26th. The subsequent fourteen cases resided in nine homes, one of these having five cases and another two. If from the latter group we eliminate three possible contact or secondary cases we have a balance of eleven cases in six houses infected subsequently to the closure of the milk-depot and sterilization of the equipment. Inadequate sterilization of bottles, the collection of outstanding bottles after the resumption of sale by E. E. on September 2nd, possibly secondary bottle infection, any or all these factors, permitting bacterial survival, may be assumed to be responsible for the later cases. In view of the failure of dairymen generally to comply with

the order of the Board of Health requiring routine sterilization of bottles, at least temporary suspension of bottle service would seem desirable, under similar conditions.

Assuming the agency of bottle infection to have been the chief means of dissemination (the great bulk of the patrons of the E. E. route having been so served), and adding to these the three non-users of the E. E. product served in bottles, we have a remainder of nine cases of whom three used condensed milk exclusively and six others were supplied in cans from five sources other than the E. E. milk. These nine cases are then unaccounted for.

With only six previously reported cases in the first three months of the calendar year 1914 and an average annual morbidity of about nineteen cases for thirteen years, it is not improbable that the nine uncheckable cases were sporadic cases, or possibly cases of fly-borne infection, distributed as they were over a period of fifty days during the time of greatest prevalence of typhoid fever in Warren Borough.

"Present methods of inspection do not prevent the occurrence of numerous epidemics of typhoid fever, diphtheria, and scarlet fever. The Health Officer should investigate the milk supply, and other possible sources of infection, of all reported cases of these diseases, and keep a record of their distribution with reference to the various dairy-men. When a dairyman shows a suspicious number of cases, due consideration being given to the size of his business and the general prevalence of the disease, the matter should be investigated. Pasteurization (and sterilization of milk bottles) seems to be the only way of preventing outbreaks of milk-borne diseases."

"Bacteriological examinations are not available for anticipating milk-borne trouble, nor usually for demonstrating the presence of the organisms in the milk. The technical difficulties are too great to take up the search for the typhoid organism in the hope of obtaining decisive useful results. The same hold true of the examination of water, in connection with a typhoid epidemic. In the case of both milk and water, one difficulty lies in the fact that the organism may not be present at the time suspicion is aroused. The facts must be determined by epidemiological evidence" (Ward). For this purpose the census cards in use by the State Department of Health were found most useful.

In the investigation of this epidemic the writer acted in the dual capacity of Secretary to the Board of Health of Warren and County Medical Inspector for the Pennsylvania State Department of Health.

INVESTIGATION OF ALLEGED CASES OF TYPHOID FEVER AT MARYSVILLE.

According to instructions from the Chief Medical Inspector, the writer proceeded on the morning of August 5th to Marysville, Perry County, to investigate a complaint made to the Department that there were a considerable number of cases of sickness in that borough which had been called "biliousness," but, in the opinion of some, were cases of typhoid fever.

The Borough of Marysville is situated on the west bank of the Susquehanna River, in Perry County near the Cumberland County line, having a population of 1,593, according to the census of 1910. It is made up largely of an industrial population whose chief means of support is employment in the Pennsylvania Railroad yards, situated at that point. The borough has a public water system, but no adequate sewerage system. There are many open privy vaults in different parts of the town. Rubbish and garbage dumps are found in many places within the borough limits; one such dump is directly on the bank of the Susquehanna River; so that, altogether, the sanitary condition of the place is at a very low ebb.

To ascertain the exact number of suspicious cases of disease in the borough, the writer proceeded first to interview all the physicians residing there and got from each of them the names and addresses of all persons with a continuous fever under treatment during the last twelve months. He then visited each one of these patients personally and inquired carefully into the character of their illness.

Water Supply.—Mr. Ennis, of the Engineering Division, in the meantime, investigated the sources of the water supply, for the purpose of making a report.

Marysville is supplied with water by the Marysville Water Company. It receives its supply from three sources: from Trout Run, Lambs Gap Run, and Sitterly Run. Each stream rises in the foothills to the west and northwest of Marysville. The water from each is conducted separately to a storage reservoir on a hill west of the borough. It is important to note that certain houses in the borough receive water directly from the mains previous to their emptying into the storage reservoir. None of the households affected, however, receive water from the intake mains leading from Trout Run or Lamb Gap Run, but the cases are all situated along the intake main leading from the Sitterly Run supply, or in close proximity thereto. The Department's field inspector found that the watersheds of the Trout

Run and Lambs Gap Run are free from human habitations and pollution. On the other hand the writer made a personal inspection of the Sitterly Run supply and found a gang of eight or ten lumbermen at work there which had been working on the water shed of this stream since the last of February or first of March, 1914. No provision has been made for the sanitary disposal of their waste and garbage. While no history of disease could be discovered, the writer did learn that two or three men who formerly worked there had left. Specimens of water were taken by him both from the intake mains and from taps in different parts of the borough, and forwarded to the Laboratory for analysis.

Milk Supply.—An investigation was next made of the milk supply. It was found that the milk supply for the borough is handled by three vendors. All of the suspicious cases of illness had bought milk from milk vendor G. H.; none of them had received milk from other two milkmen. An intensive study was therefore made of the dairies from which Mr. H. procured his milk. It was found that Mr. H. himself did not own a dairy or produce any milk. On the other hand he bought milk from four dairymen, all of whom live in Rye township, adjoining the borough of Marysville. An inspection of these dairies showed no source of infection.

Ice Supply.—Practically all of the households in which suspicious cases of illness had occurred were supplied with ice by one, R., and, as the writer had heard several complaints concerning the insanitary condition of the pond from which this ice was harvested, he made a personal investigation of the pond and had specimens of the water from it, and of the ice that is being sold in the borough by Mr. R., sent to the Department's Laboratory for bacteriological examination. This ice pond is in a very insanitary location. Surrounding it for about two-thirds of its circumference is a much traveled highway, from which all the surface drainage flows into the pond. The intake of the pond is from a little creek, which runs through an inhabited region. An inspector investigated the course of this creek and found no direct indication of pollution. On one of the banks of the ice pond was found evidence of garbage disposal; at one point, a pile of oysters shells.

Butter Supply.—Investigation brought out the fact that a certain dairy farm conducted by R. B., situated in Rye township, produced butter which was sold to the citizens of Marysville. It was found that two children living on the B. farm had been confined to their bed for three or four weeks in December, 1913, and the first part of January, 1914, and were under treatment of Dr. S., who called their disease "biliousness." The B. family assured the writer that while milk vendor H. had received milk from them at times, he had not

received whole milk from them for over two years. Occasionally a little buttermilk was supplied, but inasmuch as the dairy supplied butter to Marysville, the writer thought it worth while to send a specimen of the butter to the Laboratory for examination.

Ice Cream.—It was also discovered that practically all of the suspicious cases had eaten ice cream which had been purchased from a certain dealer, Mrs. C., who has an ice cream restaurant in Marysville. A specimen of the ice cream was provided the Laboratory for bacteriological examination.

HISTORY OF THE CASES.

So far as can be ascertained, there is only one active typhoid fever case in the borough of Marysville at present, and this one is under the treatment of Dr. G., who correctly diagnosed the case and properly reported the same. As a matter of precaution the writer took a sample of this patient's blood and sent it to the Laboratory to ascertain the presence or absence of the Widal test. Returns show that this patient, Richard H., age thirty years, whose onset was on July 22nd, gave a positive reaction to the Widal test.

Investigation, however, showed that there have been in the borough of Marysville several persons, all of whom have been under the treatment of Dr. S., who had said that their condition was due to "biliousness." There is no doubt in the writer's mind that they were cases of typhoid fever. Two or three of these persons were interviewed late in the convalescent stage. My opinion that these patients were ill with typhoid fever is strengthened by the fact that specimens of blood which the writer took from them and sent to the Department's Laboratory, showed a positive reaction to the Widal test. The individual history of these suspicious cases and convalescent patients, which had been treated by Dr. S. as cases of biliousness, it is as follows:

Cases No. 1 and No. 2.—Mrs. H. R. G., age twenty-seven, housewife, date of onset March 29th, under treatment of Dr. S., who called the disease "biliousness." Mrs. G. gave a history of malaise, headache, gradual weakness, and slight diarrhoea previous to taking to her bed. Patient was confined to her bed for about two weeks. In the fourth week, about May 1st, while she was convalescing, her three year old daughter, A. G., sickened with what Dr. S. diagnosed as pneumonia. It was impossible to elicit any definite history of the child's illness except that the mother knows that she had fever following restlessness and vomiting. Shortly after the child sickened, Dr. S. called into consultation a Harrisburg physician. The patient, Mrs. G. told the writer that the Harrisburg physician diagnosed the disease as typhoid fever, and Dr. S. admitted to the writer that the Harrisburg physician gave typhoid fever as his diagnosis. Dr. S. stated that when the consulted doctor made the diagnosis of typhoid fever he placarded

the house, but the patient, Mrs. G., says that the house was not placarded nor put under quarantine. A blood specimen taken from Mrs. G., sent to the Department's Laboratory by the writer, gave a negative reaction to the Widal test. This, however, is not surprising when it is remembered that the date of onset of the patient is given as March 29th, and the writer took the specimen on August 6th. We might not obtain a positive reaction after such a long interval from the date of onset. The child's case undoubtedly was due to secondary infection by the mother. The mother refused to allow a specimen of the child's blood to be sent to the Laboratory.

Case No. 3.—Female, E. S., age nineteen years, occupation housework, date of onset March 30th. She gave a history of having prodromal symptoms of typhoid:—headache, pain in back, weakness. This patient was treated by Dr. S. at the same time he was treating Case No. 1, and he gave the same diagnosis, namely: "biliousness." Even after being in consultation with the physician from Harrisburg, he did not change his diagnosis, although the patient is not entirely convalescent and her parents say that her condition was exactly like that of Case No. 1. A specimen of this patient's blood, taken by the writer August 6th, also shows negative reaction to the Widal test.

Case No. 4.—Female, P. M., age twenty-eight years, housewife; date of onset May 20th. The patient gives a history of being confined to her bed for three weeks with fever, after two or three days of malaise, vague pains, chills, and nausea. She was treated by Dr. S., who called her disease "biliousness." A specimen of her blood sent by the writer to the Laboratory shows a negative reaction to the Widal test.

Case No. 5.—Male, C. B., age thirteen years, occupation school-boy; date of onset May 30th; treated by Dr. S., who called it "intermittent fever." The mother said that the boy had not been well for a week before he took to his bed. He complained of headache, slight diarrhoea, weakness. The child was in bed between four and five weeks. He is now in a convalescent state, just beginning to go out. A specimen of his blood sent to the Department's Laboratory showed a positive Widal reaction.

Case No. 6.—Female, E. M.; age seventeen years; date of onset June 10th, occupation, waitress at the Central Hotel at Marysville where she first began to feel ill and returned to her home which is in Marysville. She also gives a history of having had the prodromal symptoms of typhoid fever: malaise, headache, gradual weakness, and vague pains. She was treated by Dr. S. for "intermittent fever" and was confined to her bed three or four weeks, and is now feeling rather weak; she is not able to go to work, but convalescing. A

specimen of her blood taken by the writer and sent to the Department's Laboratory also showed a positive reaction to the Widal test.

Case No. 7.—Mrs. T. F., age thirty-six years; housewife; date of onset July 8th. She gave a history of having had headache, chills, gradual weakness previous to being confined to her bed. She was sick in bed three or four weeks, treated by Dr. S. for "biliousness." The writer saw her at her home where she admitted that she still felt very weak; was not able to do her work about the house, but was able to sit up; in other words, she is in the convalescent stage. A specimen of her blood sent to the Department's Laboratory by the writer showed a positive reaction to the Widal test.

None of the patients could give any reliable information concerning the degree of fever or its character. No chart was kept during their illness, nor could Dr. S. give but vague generalities concerning this important factor in diagnosis.

Diagnosis of Cases.—While of course it would not be fair to accept the word of patients in preference to the diagnosis of a practitioner of medicine, the writer is of the opinion that most of the cases treated under the name of "biliousness," "intermittent fever," or "bilious fever," were afflicted with typhoid fever. He believes that this diagnosis is substantiated by the fact that all the recent patients, specimens of whose blood were sent to the Laboratory by him while they were still in the convalescent stage, have given a positive reaction to the Widal test.

Source of Infection.—After carefully investigating the water, milk, ice, ice cream, and butter, and other possible sources of infection, the writer's opinion is that the infection was carried to the victims through the water primarily, and, possibly, to one or two cases by the house fly. The sanitary inspection of the dairies revealed no history of typhoid infection, nor did the bacteriological examination of the milk, ice cream, or butter show any marked contamination. The ice dam is unsafe and the specimen of ice sent to the Laboratory showed the presence of four *B. coli* to the cubic centimeter, but the restricted location of the cases rules out the ice as well as the milk as the medium of the infection—both being distributed in all parts of the Borough.

Probable Source of Pollution.—In view of the fact that all the households affected received water from the Sitterly Run main and because of the results of bacteriological examination of this water, the writer believes the source of infection to have been the pollution of Sitterly Run stream by one of the men in the lumbering gang, who possibly may have been a typhoid fever carrier. It is not impossible, however, in view of the fact that these cases were treated as "bilious fever," with no instructions given to have the patient's

stools properly disinfected before throwing into open privy vaults, that the house fly may have been or may yet be the medium of transmitting the infection in Marysville.

Supplementary Note.—To show more clearly the character of the water supply of the infected district, and by the courtesy of the Division of Sanitary Engineering, the writer appends the following extract from the report of Mr. Eunis to the Chief Engineer:

Sitterly Farm Run has its source in Rye Township less than two miles northwest of the borough on the Sitterly Farm. The drainage area above the water company's intake comprises approximately one square mile of wooded land, which is not cultivated and was not inhabited prior to the first of March, 1914, at which time a lumber camp comprising about ten men was established on the shed.

The minimum flow of the stream is reported to be in the neighborhood of 75,000 gallons daily. The intake consists of a dilapidated stone catch basin built in the bed of the stream a short distance above a considerably travelled road. From the catch basin water flows by gravity through a four inch main about 5,000 feet in length to the borough equalizing reservoir. The elevation of the intake basin is approximately fifty feet above the water level of the reservoir and there are ten or twelve taps on the line supplying water to dwellings.

Samples of water from this supply examined at the Department Laboratories gave the following results:

Date.	Source.	Bacteria per c. c.	B. Coll per c. c.
August 5th	Tap Sitterly Run supply.	88	1
August 12th	Sitterly Run intake,	1,140	12
August 12th	Tap at the Renfler residence on Sitterly Run supply line,	160	0

All consumers along the gravity main were warned to boil all water used for domestic purposes. A plug was inserted in the outlet end of the supply main where it discharges into the reservoir so that this water would not get into the general distributing system. The water company was notified to discontinue the use of this water and not to use it again as long as there should be any lumbering operations upon the water shed, and until the Department was satisfied of the purity of the supply. This condition still exists, but the water company intends ultimately to supply these consumers with water from another source, unless it is found that the Sitterly Run supply can be protected against all possibility of contamination.

EPIDEMIC OF TYPHOID FEVER IN SKIPPACKVILLE AND VICINITY.

One of the most disastrous milk-borne epidemics of typhoid fever the Division of Medical Inspection has been called upon to handle occurred during August, September, and early October, 1914, along a retail milk route extending through the villages of Skippackville, Cedars, and Worcester, in Montgomery County, a distance of about five miles along the Skippack pike. The facts concerning the epidemic are as follows:

About the middle of July one E. N., a tenant occupying half of the farm house of H. T., near Skippackville, sickened with typhoid fever, the source of his infection being indeterminate. This man, who unfortunately lost his life from the disease, was already so ill when the epidemic was investigated that we could not secure an interview with him. Through his wife and friends we traced his movements as fully as possible. He was a laborer, the bulk of his work being that of an assistant to stone masons and at times hod-carrying. He had worked in many sections of the country and had partaken of water and food from many different sources during the period when he must have ingested infection. A report of his illness was mailed to the Department's Health Officer by his physician Dr. W. J. Wright, at the end of July, and the house was placarded by the township Health Officer on the first day of August. The required household regulations were then established and the usual instruction was given for the disposal of excreta.

The dwelling occupied by the patient and his family was one end of the farm house with separate outside entrance, and to all intents and purposes the equivalent of one end of any two-family dwelling. It was alleged by the patient's family that no communication whatever took place between the farmer's family and that of the tenant, the milk producer's family asserting that none of them ever entered the tenant's dwelling. The source of this infection being indeterminate, and probably not on the farm, the sale of milk from the farmer's premises was not discontinued.

Subsequent events, however, showed that not all of the facts were given to the Health Officer, and that if given they would have led to the establishment of very different regulations. For instance, it was not intimated during the Health Officer's interview that the heads of the families were brothers-in-law or even friends, nor was he informed that the attending physician had immunized the other members of the patient's family and the members of the farmer's family

in the other end of the building. He was distinctly given the impression that the families were not friendly; that they did not enter each other's dwelling, etc., and he so reported the situation to Dr. H. H. Whitcomb, the County Medical Inspector. The fact that Mr. T., the owner of the dairy, at some time earlier in July had suffered with an illness characterized by fever and extending over a period of several days, had also been withheld. It is but fair to say, however, that the illness of Mr. T. was not sufficiently marked to confine him to his bed for more than a few hours each of several days.

The products of the T. dairy had been shipped to the creamery in Cedars near Skippackville until about the first of August, when the proprietor of the dairy farm bought out the retail milk route of one B., an organized milk route extending for about five miles along the Skippack pike through the villages of Skippackville, Cedars, and Worcester. Late in the third week and during the early part of the fourth week of August, less than a month after Mr. T. began to deliver milk along this route, numerous reports of typhoid fever were made to the Department's Health Officers in the townships of Worcester and Skippack. A preliminary investigation made the latter part of August by County Medical Inspector Whitcomb brought out information that pointed strongly toward milk as the probable source of the disease and also brought out the fact that a good many other persons were ill with fever of an indefinite type not yet diagnosed by the attending physicians. Further visits were made by the County Medical Inspector on the 26th and 29th days of August and again early in September. The Chief Medical Inspector went over the district with Doctor Whitcomb on the 11th and 12th days of September. These investigations and further studies all tended to confirm the suspicion that the T. milk was the source of infection.

A complete analytical study was made of each case of typhoid fever as soon as practicable after it was reported by the physician. The detailed study was checked against each possible source of infection in the way of contact, food, and drink. It was very readily proven that no common source of food obtained other than the T. milk which had been used by all who sickened along the route. A number of persons who visited the N. family on the infected dairy farm and took food or drink there, and several who were employed on this farm, also sickened with the fever. Clams had been used by a few of the sick, but a large majority had had no kind of shell fish. Water from wells showing sewage organisms had been drunk by some, but in many instances the only water used tested pure and no one well was used by a number of individuals. Many of those sickening gave no history of contact, either recent or remote, with persons known to have the disease. For this reason, we do not include with this report a tabulation against the various food supplies. All the

primary cases could be traced directly or indirectly to the one common source of infection on the dairy farm, and all secondary cases could easily be traced to sources mentioned further along in this report where each type of secondary case is more fully discussed.

It would appear from these studies, based on clinical evidence, that milk sold by Mr. T., during the greater part of the month, was infected with typhoid germs. The epidemic first came to our notice early in the fourth week of August and was already so far advanced and so large a number of the consumers of this milk had apparently been infected that the efforts made by the Department and by the attending physicians to save some of the consumers were of no avail. Numbers of those who were already in the prodromal stage of the disease continued to come down with the fever. Consumers of the milk, resident in the district or temporarily boarding there, were reported as ill in various sections of the county and in adjoining counties.

The epidemic, so far as we were able to trace the patients, consisted of ninety-one individuals whose infection was directly traceable to milk or to immediate contact with the sick on the T. premises; of six secondary cases in homes where intelligent nursing could not be secured; of a series of seven interesting secondary cases, due to pollution of water during the epidemic; and of three other secondary cases probably due to the development of a "carrier" in one of the families.

Several interesting and, for a time, baffling cases were found. In one instance a hostler, employed in one of the hotels in the village of Skippackville, denied absolutely having drunk milk or having used it in coffee or with desserts; although the hotel where he worked and ate was supplied with the T. product. On visiting his home we obtained a similar history, together with a report that he not only took no milk in his coffee at home, should he by chance take a meal there, but at no time drank or ate deserts with raw milk or cream. The family milk supply, however, was the T. supply. On very carefully questioning the housewife, whose two little girls had sickened about the same time the husband developed the disease, we learned that a little more than two weeks prior to the illness of the three an unusual supply of T. milk had accumulated in the home, and, in order that it might be used as food, it had been frozen into ice cream. The husband, who consumed no milk at the hotel where he worked and also consumed no milk with coffee or desserts at his home, had, together with the children, eaten heartily of this ice cream.

In two or three other instances persons were found who took no milk in desserts or as a beverage but did use considerable quantities of milk or cream in coffee.

TABLE I.

Dates of Onsets.

	Cases.		Cases.
+July 20, 1914,	1	September 3,	2
*August 9,	1	September 4,	2
*August 11,	1	September 5,	1
August 14,	3	September 6,	3
August 16,	4	September 7,	3
August 18,	4	September 8,	1
August 19,	1	September 12,	1
August 20,	4	September 14,	2
August 21,	5	September 22,	2
August 22,	2	September 24,	2
August 23,	4	September 28,	1
August 24,	7	October 3,	1
August 25,	5	October 14,	1
*August 26,	5	October 15,	2
August 27,	1	October 18,	2
August 28,	5	October 25,	2
August 29,	1	†December 30,	1
August 30,	2	†January 5, 1915,	7
August 31,	4	†January 9,	1
September 1,	10	†January 10,	1
September 2,	1		

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+The N. case.

†Water infection due to well pollution.

*Infected on dairy farm.

‡Secondary to carrier.

Cases Grouped By Place of Residence.

Skippack Township,	55	Marlboro Township,	2
Worcester Township,	28	Upper Salford Township,	2
Towamencin Township,	9	Lansdale Borough,	2
Hatfield Township,	2	City of Philadelphia,	5
Hatfield Borough,	1	City of Norristown,	2

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It will be noted that two cases sickened less than two weeks after the milk route began to be served from the T. dairy farm. The two persons sickening on the 9th and 11th of August respectively, were in all probability infected on the T. farm where E. N. had been sick since the 20th of July. One of these persons admitted having partaken both of food and water on the T. premises; the other, a relative of the dairyman, would not admit having been on the premises, but reports reaching our inspectors showed that the statement could not be relied upon, as they learned of his having been there.

Over two-thirds of the cases sickened between the 14th day of August and the 8th day of September. The sale of T. milk was ordered discontinued by the County Medical Inspector on the 27th day of August although some of this product was served, in violation of the order, until the 29th. Counting the extreme period of twenty-five days from the date when the last of this milk may have been used, would enable us safely to include all persons sickening as late as possibly September 24th. This could account for all cases included in the primary infection.

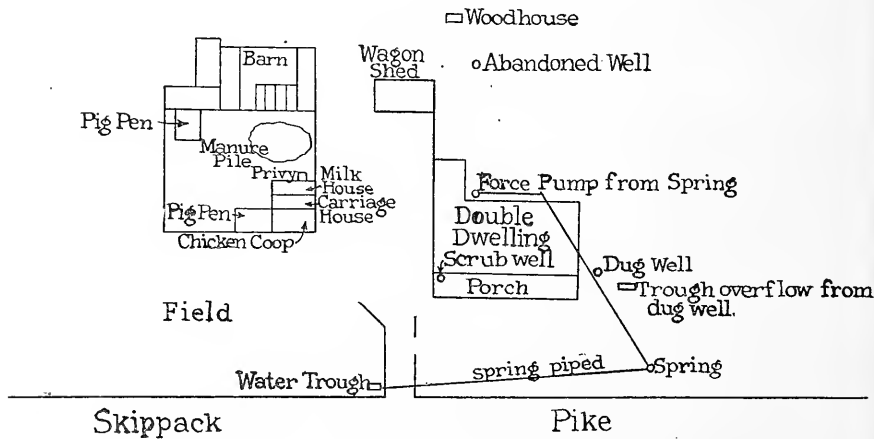
It may further be noted that the persons sickening showed about the usual age and sex distribution with a slightly greater frequency of the early age periods than is common in water-borne epidemics. This, of course, would be expected in a milk-borne epidemic because the use of milk is more common among children than among grown-ups.

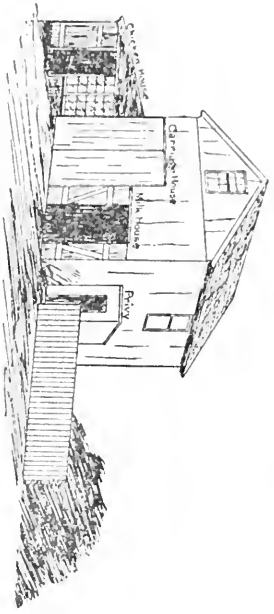
TABLE II.
Age and Sex.

Years.	Male.	Female.	Total.	Years.	Male.	Female.	Total.
0-4,	3	2	5	50-54,	2	2	4
5-9,	5	12	17	55-59,	1	3	4
10-14,	6	6	12	60-64,	1	1	2
15-19,	6	5	11	65-69,	0	2	2
20-24,	7	6	13	70-74,	0	2	2
25-29,	8	3	11	75-79,	1	0	1
30-34,	2	5	7	Unstated,	1	2	3
35-39,	0	2	2				
40-44,	7	3	10				
45-49,	0	2	2		50	58	108

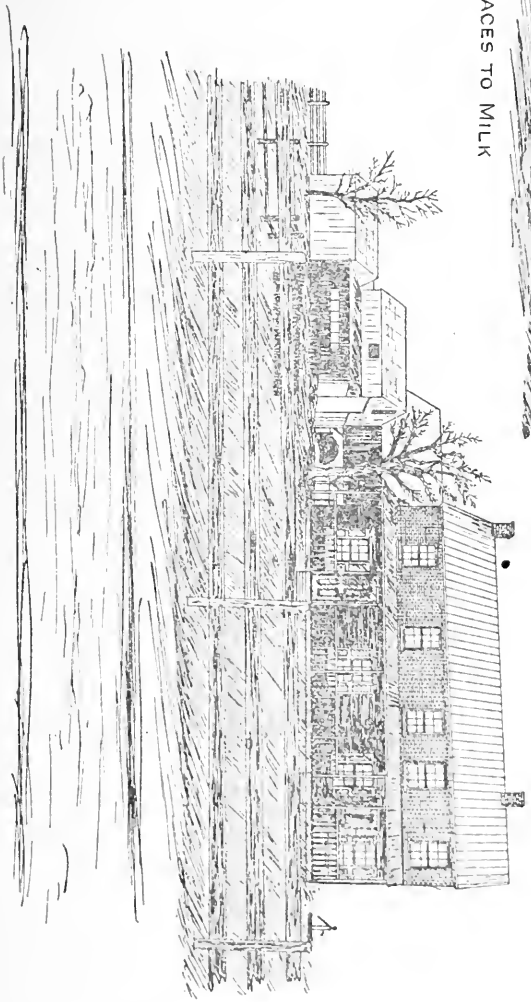
The sketch on the opposite page shows the general character of the dairy premises and the diagram below indicates the relation of the buildings to the T. dwelling occupied by the dairy farmer and by his tenant suffering with the disease, a relation which is very interesting. The dwelling house stands across the private entrance from the wagon shed converted into a bottling house. The bottling house is immediately adjacent to the barn yard and barn privy.

INFECTED DAIRY
RELATION OF FARM BUILDINGS TO
MILK HOUSE, MANURE PILE, AND PRIVY





MENACES TO MILK



SKETCH OF INFECTED DAIRY PREMISES,
SKIPPACK, MONTGOMERY CO.

MANAGEMENT OF THE OUTBREAK.

We were soon convinced that the outbreak would be one of considerable size and that great care would have to be taken to protect the local and public water supplies. The district through which the cases were distributed is for the most part a red shale country with water supplied almost entirely from shallow wells and springs. The ground waters tapped by the wells are found comparatively near the surface and at certain seasons of the year the hills and slopes near many of the dwellings literally ooze water.

The map for the section of country extending some five miles along the Skippack Pike is on the opposite page and shows graphically the relation of many of the infected dwellings to small streams and springs in the community. The villages were for the most part settlements of retired farmers. Many of the citizens owned the houses in which they lived and were in comfortable financial circumstances. The houses at which practically all the infections occurred, save a few secondary cases, are indicated, together with the number of cases in them, and the location of the polluted A. spring, responsible for the secondary cases occurring in January, 1915, and due to polluted water, is shown in relation to the A. dwelling.

Strict precautions were taken with all excreta. Every individual householder was carefully drilled in methods of disinfection and instructed as to the danger of allowing infected material to get into the ground without being rendered innocuous. We constantly impressed upon individuals and upon the entire community the danger of polluting their own local water supplies, and called their attention continuously to the danger of polluting the small streams flowing by numerous properties, often within twenty or thirty feet of the dwellings. These streams flow into the Skippack Creek, which in turn discharges into the Perkiomen Creek some few miles above the intake of the Norristown water supply. It was considered advisable, as a preventive measure, to have two representatives of the Engineering Division patrol the district and frequently give detailed instructions in the care of stools and urine. They visited every infected premises several times a week and watched carefully that the disposal of all excreta was in compliance with our printed instructions and done in a way that would protect wells and streams.

The water supplies on the T. farm were sampled on the 5th day of August, the well showing a hundred and twenty-eight colonies of ordinary bacteria and eight colonies of *B. coli* to the cubic centimeter. The water from the spring showed forty-eight colonies of ordinary

bacteria and twelve colonies of *B. coli* to the cubic centimeter. Advice was given for disinfection of both of these sources of supply. This advice was followed and subsequent analysis showed improvement.

There is a possibility that excreta from the N. household polluted the water prior to this time and that the water thus polluted may have contaminated the milk cans and containers, and thus caused the epidemic along the milk route, although it seems quite as likely that the pollution of the milk may have been done by flies carrying the infection directly from the excreta to the bottles exposed all day long in the bottling house by the barn yard. N. probably used the barn privy until he took to his bed. Neighbors claim to have seen excreta and wash water thrown on the dung hill immediately adjacent to the milk house during the illness and it is possible that infection may have reached the milk house in this way.

At a later date, about the last day of August, two samples of water collected at the T. premises, one from the spring and the other from the dug well, showed a higher bacterial count; that of the spring 2,769 colonies of ordinary bacteria and 96 colonies of *B. coli* and that of the well 1,440 colonies of ordinary bacteria and 144 colonies of *B. coli* to the cubic centimeter. The ice was melted, however, when the samples reached the laboratory and these high counts may have been in part due to the multiplication of bacteria after the ice melted. On the 24th of September, subsequent to an alleged disinfection, samples were again taken from the T. water supplies, and the dug well at the house then showed no *B. coli* and but 54 colonies of ordinary bacteria; the spring, no *B. coli* and 1,500 colonies of ordinary bacteria.

In addition to studying the samples of water taken from the various supplies on the dairy premises, the Department representatives, who were watching the disposal of excreta and enforcing precautions throughout the district, collected samples of water from forty-two different supplies in the community and in each instance where any sewage organisms were found, or where the total bacterial count, exclusive of sewage organisms, was high, the householder was urged to clean and disinfect the well and was given the following extract from the Health Officer's Manual:

DISINFECTION OF WELLS, SPRINGS, CISTERNS, ETC.

"The cheapest and best disinfectant for the purpose is freshly burned, unslaked lime. For the ordinary well, one-half barrel of lime should be emptied into the same and the walls above the water level thoroughly scrubbed with the resulting milk of lime by means of a stiff brush. The well should be pumped dry, allowed to refill and a like amount added. It should then be permitted to stand for twenty-four hours and then successively exhausted and allowed to refill until the lime can no longer be detected in the water. The water is then purified and should be drawn through the pipes and fixtures until they are thoroughly washed out. In the case of springs or cisterns an adequate amount of lime should be used, and their sides and bottoms should be thoroughly scrubbed."

At the same time, these officers required the emptying and cleaning of privy vaults, the removal of stable-refuse, and the abatement of fly breeding nuisances, and corrected such insanitary conditions as were found on the various properties.

A special placard was designed to warn the citizens of the community and the many touring parties which go through the villages by automobile as to the probable danger from drinking water in this community. The placard read as follows:

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF HEALTH

WARNING

TYPHOID FEVER IS PREVALENT IN THIS COMMUNITY

BOIL ALL WATER USED FOR HOUSEHOLD PURPOSES

SAMUEL G. DIXON, M. D.,
COMMISSIONER OF HEALTH.

and was placed on all telegraph poles, shops, stables, weigh scales, or such other public places where it might in any way warn those approaching wells not on private property, and these placards were kept in place until long after the epidemic subsided.

Norristown, only twelve miles away, was, of course, kept fully advised as to the progress of the epidemic and great care was practised in purifying the water there, not only during the epidemic but for a long time thereafter.

SECONDARY CASES.

It was impossible to secure a satisfactory nursing service for the many persons sick in the district. Untrained nurses were in charge of most of these cases of typhoid fever until the disease was well developed and the diagnosis established and, in many cases, throughout the illness. Unfortunately, several untrained nurses became infected, either prior to our instructing them in details of personal care and in the care of excreta or subsequently to it. One poor woman who assisted in the running of her household and shared in nursing her husband, two children, and the landlord, succumbed to the illness. Her aged mother who helped with the nursing also contracted the disease.

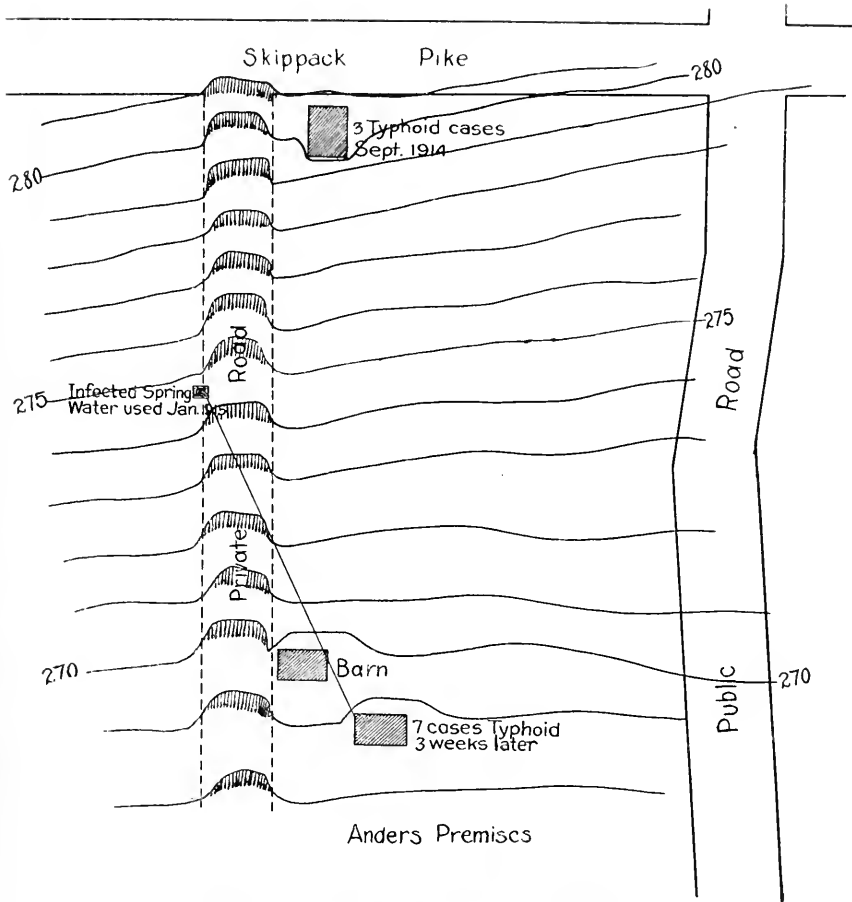
In one family where a little daughter had visited the original case with her father and later became ill with the disease at her home in a remote rural section, three brothers contracted the disease from two to three weeks after this little girl sickened.

Another secondary case occurred in the family of a bridge builder who received his infection at the S. boarding house in Skippackville. His wife, who nursed him at his home at Sumneytown in another section of the county, unfortunately also became infected.

As this report was being prepared word came to the County Medical Inspector of a family outbreak of typhoid fever in Worcester Township on the premises of J. C. A. An investigation revealed an interesting situation so far as probable source of infection was concerned. Mr. A. during the severe drought in the autumn of 1914 built a concrete wall about a point from which a spring emerges during many months of each year and arranged for drawing this water through pipes to his dwelling and barn, during such months of the year as the spring might flow. The introduction of this water to the farmer's premises took place early in January, 1915, and within three weeks from the time the use of this water was begun seven members of the family came down with typhoid fever. In the map showing the distribution of cases along the Skippack pike the spring will be noted as within two hundred feet of certain privies and grounds where typhoid fever occurred in the autumn of 1914 and as the formation of the ground is entirely shale it seems altogether likely that the spring may have been polluted, as soon as the ground waters rose and began to flow, by typhoid excreta not properly handled in the autumn. Bacteriological analyses of the water from this spring showed sewage organisms and it was accordingly placarded and the householder warned as to the danger from its use.

The appended sketch shows very well the relation of the premises wherein typhoid fever was treated in September and the farm spring causing the family outbreak in January.

The most interesting group of secondary cases, however, occurred in the S. family. Mrs. S. kept a boarding house and was served with T. milk. She herself and a number of her boarders became infected. The boarders were scattered in various sections of the county, hence an accurate census was difficult to obtain. Mrs. S. was nursed at her home by an eighteen-year-old daughter, who had no special training as a nurse, but when an investigation was made by the Chief Medical Inspector, she was found to be practising the precautions advised in the circular of the Department as intelligently as a trained nurse would have been expected to carry out such precautions, and she was especially commended for her care. She escaped infection. The mother had a tedious recovery and apparently from subsequent history became a "carrier case." They moved, some time after the mother's recovery, from Skippackville to Washingtonville, Montgomery County, and E. H., who had been so successful in nursing the mother through her illness, sickened about the first of January, 1915, with typhoid fever. Her younger sister, a little girl of six, and a cousin, a little girl



How the Premises of A. were Infected.

of eight, seemingly contracted the infection at about the same time. All three were probably infected from Mrs. S. and after she was supported to be entirely well.

The infection was particularly virulent in type; the original case, E. N., died on the 11th of September, during the height of our investigation. Eleven additional persons are known to have died from the disease, a mortality of twelve in a total of one hundred and eight cases, giving a fatality of eleven and one-tenth per cent.

It is possible that yet other persons were infected in the community because the two hotels were popular eating houses frequented by automobile parties and, prior to the time the Department began handling the epidemic, abundant opportunity for infection was afforded to such patrons of the hotels as partook of milk or milk products.

The following interesting letter from Dr. W. J. Wright, of Skippack, referring to the number of persons immunized in the infected district and the results of the immunization, his attempts at immunization in persons who were presumably infected, his comments upon treatment with typhoid vaccine, and some details concerning E. H. sickening subsequent to immunization, are of sufficient interest to justify quotation:

"I immunized forty-seven persons in homes not infected and none of the forty-seven developed typhoid. I immunized thirty-three in infected homes where one or more of the family had typhoid and only one of these developed typhoid—E. H. Six others received one or two injections before developing typhoid. In all the cases Mulford's Immunizing three syringe package was used, giving the doses at periods of seven to ten days. Most of the doses were ten days apart. In those who had received the immunizing doses and developed typhoid, two were rather of an abortive type, three ran the usual course, one was a prolonged type with several small hemorrhages. I rather thought it hurried the onset where they were already infected when the vaccine was given. Reactions were very severe, chills, high fever, and sore arms. In three cases I gave small doses (250 millions of killed bacteria) at five to six days intervals during the course of the disease. In one of these I had a severe reaction when the third dose was given. The other two were not helped and both seemed as if the fever remained longer than the usual course. My conclusions were that when infection has occurred vaccine hurries on the approaching onset and reacts very violently.

"During attacks the dose should be very small and is of very doubtful value. I am heartily in favor of its use before infection as a prophylactic. In the N. family I immunized Mrs. N. and daughter, also in the same house the T. family consisting of Mr., Mrs. and baby. None of these developed typhoid. E. H. received three injections (Mulford's Immunizing Package) given at ten day intervals in September. She nursed her mother through a long attack of typhoid (beginning in September, 1914), covering a period of twelve weeks. She developed typhoid at Washington Square in January following. About the time her mother began to cook and take care of the house. Her sister and cousin in the same house developed typhoid about the same time."

SUMMARY.

The entire outbreak, then, not including the N. case occurring in July, consisted of ninety-one typhoid fever infections due as nearly as could be ascertained, to conditions on the T. dairy farm or to the use of milk served from the farm, and sixteen secondary cases. Of

the secondary cases six were house contacts or due to persons assisting with the nursing; seven were water-borne cases of typhoid fever, the water having become infected and the use of it having begun some three months after the original outbreak; and three cases were secondary to a "carrier case" succumbing to infection more than three months after the person who originally contracted the disease had returned to work. And finally one of the last mentioned secondary cases contracted the disease less than four months after being given the usual immunizing treatment.

REPORT OF AN INVESTIGATION OF AN OUTBREAK OF TYPHOID FEVER IN LEHIGH UNIVERSITY.*

In accordance with your instructions I proceeded to South Bethlehem, Northampton County, on October 12, 1914, in order to determine the cause of the prevalence of typhoid fever in Lehigh University.

I was associated in this work with Assistant Engineer W. H. Ennis, particularly in the investigations of milk and other food supplies and of the water supplies on dairy farms. The details are set forth in this report.

DISTRIBUTION OF CASES.

The morbidity among Lehigh University students relative to the community as a whole was so high and the dates of onsets limited to such a brief period that a study of other than university cases, is presented separately. During 1914 the following cases of typhoid fever were reported in the health districts mentioned:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total.
South Bethlehem borough,	2	3	1	5	0	0	0	0	1	12
Bethlehem borough,	2	0	1	1	2	0	0	0	2	8
Northampton Heights bor-	0	0	0	1	0	0	0	0	1	2
ough,	0	0	1	0	0	0	0	0	1	2
Fountain Hill borough,	0	0	0	0	0	0	0	0	0	0
Rittersville,	0	0	0	0	0	0	0	0	0	0
										24

Nineteen of these twenty-four cases became sick prior to June; the five developing the disease during September represent a very low relative morbidity as contrasted with the occurrence of the disease during September in previous years. Infection of these patients

*This report is supplemented by Section 30 of the report of the Division of Sanitary Engineering.

was traceable to varied factors, the only thing in common being the use of water supplied by the Bethlehem City Water Company.

The Bethlehem City Water Company supplies water to a large area extending from the eastern limits of East Allentown to sections east of Bethlehem and South Bethlehem boroughs respectively. The estimated population as based on increases during the period between 1900 and 1910 would show the following:

South Bethlehem Borough (including Lehigh University),	22,356
Fountain Hill Borough,	1,431
Northampton Heights Borough,	1,037
West Bethlehem Borough (estimated),	4,500
Hanover Township, Lehigh County (estimated),	2,600
Salisbury Township, Lehigh County (estimated),	4,700
Lower Saucon Township, Northampton County (estimated),	4,300
Bethlehem Township, Northampton County (estimated),	3,200
State Homeopathic Hospital for the Insane, Rittersville,.....	1,150
	45,274

The September morbidity from typhoid fever in the townships supplied by the Bethlehem City Water Company consisted of two cases, both of which were isolated and were traced to factors having nothing in common with the Lehigh University group.

The distribution of twenty-four cases of typhoid fever throughout such a large and populous water area and extending over a period of nine months would indicate that a water-borne infection could be excluded as the explanation of the cases in Lehigh University. The preliminary investigations of the water supplies by Engineer Ennis had already confirmed this point as set forth in his report.

If water were the transmitting agent the pollution of the water supplied to the University would have been limited to the University Campus. The import of this will be considered later on.

LEHIGH UNIVERSITY.

The University is located within the limits of South Bethlehem and Fountain Hill. The enrollment during September, 1914 was upwards of seven hundred, the usual percentage of fluctuation taking place incidental to late registration, entrance requirements, and removals.

Lodging for the students is found in two large dormitories on the Campus and in fraternity and private houses throughout the towns near by. Meals are purchased at the Commons (a dining hall established and maintained under the direction of the University), in a number of restaurants in South Bethlehem, in fraternity houses, and, to a much less extent, in local boarding houses. Water for all purposes (except fire control) is purchased from the Bethlehem City Water Company; sewage is discharged into the municipal sewerage system of South Bethlehem, the outlets for which are into the Lehigh River.

At the time of the infection the students had not become fully settled in routine work and they were, for the most part, a floating population, particularly in the purchase of meals. This was less true of those dining in the Commons. The latter, located on the Campus, provided meals for over three hundred students, the noon meal averaging three hundred during the period of the probable introduction of typhoid fever, the average census for the morning and evening meals being somewhat less. Tickets were provided, the use of which gave single meals at a lower cost but "extras" were served, for which a small additional charge was made. The popularity of this method is shown by the large percentage taking advantage of the service.

The official opening of the University took place September 16th, and the first case of typhoid fever came to the attention of the local physicians during the first week of October. Your assistance was requested on October 10th, by Dr. W. L. Estes, Surgeon in Chief of St. Luke's Hospital and Lecturer on Hygiene and Physiology in Lehigh University.

Owing to previous prevalence of typhoid fever in the valley of the Lehigh River it was suggested that the disease might be water-borne. Accordingly, Assistant Engineer W. H. Ennis was detailed, his investigation dating from the evening of October 10th.

Your medical representative arrived in South Bethlehem on October 12th and a detailed census was at once made, which, with the exclusion of the public water supplies on October 13th, led to the establishing of a tentative conclusion that the infection was due to conditions existing in the Commons and limited to it. The investigations are not presented in chronological order since this tentative opinion was fully confirmed by the results as finally developed.

EPIDEMIOLOGICAL DATA.

It was possible to secure very accurate information on the points which could not be learned at the University by sending a census form and additional questions (pertinent to the customs of each patient) to his parents or physician. By this method a complete census of all cases except one was finally obtained. This included studies of the detail of use of food, water, and contact of fifty-four cases, fifty-three students (males) and one waitress (in the Commons.)

Age.			
18 years,	12 cases.	24 years,	3 cases.
19 years,	14 cases.	25 years,	1 case.
20 years,	13 cases.	27 years,	1 case.
21 years,	6 cases.	Unstated,	2 cases.
22 years,	1 case.		
23 years,	1 case.		
			54 cases.

TYPHOID MORBIDITY CURVE

LEHIGH UNIVERSITY

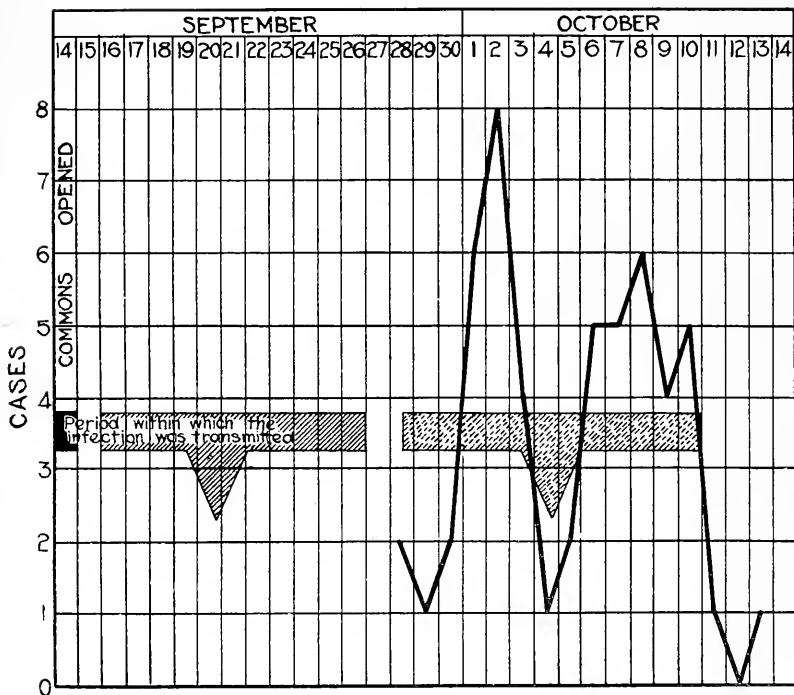


Diagram showing the only possible period of transmission *by a carrier*, preceding the earliest and latest date of onset by fourteen days. The inverted peak in the shaded areas indicate an hypothetical break in the transmission.

The age periods coincide with the accepted susceptible age and the age of the major number of students; the average age of the Lehigh students is somewhat over nineteen. Professors and instructors occasionally purchase the noon meal in the Commons but the number in proportion to the total number of students was so small that the absence of morbidity among them (providing the method of transmission was by means of the commons) is easily understood.

The residence of the cases was as follows:

	Cases.
Drown Hall (Campus),	1
Taylor Hall Dormitory (Campus),	24
"Die Alte Brauerei" Dormitory (Campus),	5
South Bethlehem Borough,	17
Delta Tau Delta Fraternity House,	1
West Bethlehem (Bethlehem Borough),	1
Unstated,	5
	54

The principal conclusion drawn from this distribution is to confirm the localization of the infection to the Campus and to limit the possibility that students living in boarding houses were commonly infected.

All cases purchased all or most of this meals in the Commons. The dates on which they began to dine in the Commons and the dates of onsets were important in order to establish the particular time of infection. These dates were as follows:

Date of Reporting at Commons.

September 14,	30	September 19,	1
September 15,	8	September 22,	1
September 16,	4	Unstated,	6
September 17,	2		
September 18,	2		54

Date of Onset of Typhoid Fever.

September 28,	2	October 7,	5
September 29,	1	October 8,	6
September 30,	2	October 9,	4
October 1,	6	October 10,	5
October 2,	8	October 11,	1
October 3,	4	October 13,	1
October 4,	1	Unstated,	1
October 5,	2		
October 6,	5		54

The Commons opened for service on Monday morning, September 14. It was evident that if the infection was transmitted through something in use in the Commons it must have been subsequent to that date.

In order to show that no other source of food supply was common to this group of patients, information as to the use of food was obtained from each.

Sources of Food Taken Elsewhere.

	Cases.
Williamsport and the Delaware Water Gap,	1
Reading and Asbury Park,	1
Columbia, South Carolina,	1
Pittsfield, Mass., Hartford and Preston, Conn., and Fraternity House,	1
Allentown, Reading, and Gettysburg,	1
Muhlenburg College, Allentown,	1
Boarding House, South Bethlehem,	1
Merchants Hotel, South Bethlehem,	2
Bethlehem Preparatory School,	1
Same's Restaurant, South Bethlehem,	6
Lehigh Restaurant, South Bethlehem,	3
Same's Restaurant and Lehigh Restaurant,	1
Same's Restaurant and Narberth,	1
Lehigh Restaurant and Andover, New Jersey,	1
Same's Restaurant and Ruthardt's Restaurant,	1
Oppelt's Restaurant,	2
Oppelt's Restaurant and Eck's Restaurant,	1
Various Restaurants,	1
Various other houses,	8
Home (West Bethlehem),	1
None other than the Commons,	11
Unstated,	7
	54

All had food in the Commons. The only other sources common to more than two of the cases were in the Lehigh Restaurant (five cases) and in Same's Restaurant (nine cases).

The only place in which students commonly purchased refreshments was the confectionery store of Oppelt on Fourth Street, South Bethlehem. In this store soda water, ice cream and light lunches were sold. From the census it was shown that the purchase of refreshments in this restaurant was as follows:

Use within incubation period,	36 cases.
None,	10 cases.
Unstated,	8 cases.
	54 cases.

The kinds of purchases could not be accurately determined but it was apparent that but a small proportion purchased ice cream or drinks in which milk was part of the mixture; only three purchased meals and it is likely that all other purchases were soda water.

The service in the store consists of H. J. Oppelt, Miss Bert Oppelt, two waitresses, two kitchen maids, and two errand boys. All gave negative histories except Miss Bert Oppelt, who had a mild attack of typhoid fever about six years ago. A specimen of blood was collected and forwarded to the Laboratories, a positive agglutination with *B. typhosus* being secured. Feces were not submitted. Miss Oppelt acts as manager of the restaurant and has nothing whatever to do with the preparation of the food. The serving of milk and ice cream preparations at the fountain is practically always done by Mr. Oppelt. Assuming Miss Oppelt to be a carrier, it seems impossible that she should be the means of infecting fifty-four persons within a period of seven to ten days through the medium of foods handled by her in this restaurant.

Ice cream was purchased from M. E. Abel, Easton, who sells very large quantities throughout the Lehigh Valley. Typhoid fever was not prevalent in the districts throughout which the ice cream was delivered. Milk was purchased from the Ritzman Dairy, a local dealer, who gives a negative history of typhoid fever on his own dairy and on the sources of supply. The bread and rolls were obtained from a local dealer.

The use of materials which would transmit the disease in the Commons seems to offer the most probable means of establishing a definite diagnosis. The following facts were obtained relative to each vehicle by means of which the typhoid bacillus is commonly distributed.

Water: Water, of course, was common to all students, to the teaching staff of the University, and to the various employees. It is obtained from the Bethlehem City Water Company, the University having a pipe system extending throughout the grounds, and is pumped from a sixteen inch diameter pipe belonging to the Water Company through a three inch diameter suction pipe, directly into a force main leading to two tanks which are located on a high point on the University property.

The tanks are of wooden construction, have removable wooden covers, and together have a capacity of thirty thousand gallons. The supply in the tanks is kept at a constant level of three feet; when it falls below this level this is automatically recorded in the pump station and pumping is resumed. From the tanks the water flows by gravity to the dormitories and other buildings on the Campus. It was thought that misdemeanors might have been committed by boys from the neighboring communities; it had previously been observed that the covers had been removed and waste material and broken glass were found in the tanks. Such a condition was found just prior to the opening of the University during this fall.

The Commons is located about one hundred and fifty feet below the level of the tanks and the water supply is directly from the force main and only indirectly from the tanks; owing to the large use of water, pumping is kept up practically constantly and it is probable that during the daytime the water is always directly from the force main. The distribution of cases bears no particular relation to the use of water from the tanks. This is noted in the table showing the distribution of cases; twenty-three of the fifty-three cases residing elsewhere than on the Campus did not use this water except in the Commons.

There is an additional water supply from springs which is used for fire protection and was the original source of supply to the former Mountain Water Company. There is no connection between the two systems on the University grounds. An investigation made

of the source of supply and the distribution of the Mountain Water Company resulted in negative findings relative to transmission of typhoid fever.

To recapitulate, if water supplied by the Bethlehem City Water Company were the transmitting agent, the morbidity would have been correspondingly great outside the University; this has been shown not to be the case.

If the water were infected in the storage tanks, the higher morbidity would have been in the buildings receiving water by gravity from these tanks. Not only was the distribution of cases not based on such water distribution but also it was shown that twenty-three never had water delivered into the University piping system except in the Commons. It has been shown that back flow from the tanks to the Commons could not occur because of the automatic control of water levels in the tanks. It is a safe conclusion, therefore, that water was not the transmitting agent.

Milk: All the patients having typhoid fever in the University used milk at the Commons in some way. The method of use is shown in the following table:

Use of Milk.

As beverage only,	None
In tea or coffee only,	None
On cereals only,	6
As a beverage and on cereals,	3
As a beverage and in tea or coffee,	26
As a beverage, on cereals and in tea or coffee,	11
Unstated,	8

54 cases.

Because the great fluctuation of demand made it economically impossible to purchase from local dealers on any other basis, the milk supplied to the Commons is obtained from a middle-man. The latter, Andras Kocsiczky, who has the contract for the session 1914-1915, is a Hungarian having his milk station on Fifth Street, South Bethlehem. He purchased his milk supplies from four dairymen, one of whom obtains his supply from five others. The four principals will be referred to as Nos. 1, 2, 3 and 4 respectively.

Andras Kocsiczky, the middleman, sold thirty-five to forty gallons directly to the Commons and to other dealers in bulk and to station patrons in small quantities. The daily supply to the Commons was from No.'s 1 and 2 regularly, in their own cans, and without transfer. On only one occasion, September 22nd, was an additional supply delivered, at which time a can containing twelve gallons of original milk from dairy farm No. 3 was delivered during the afternoon. He stated quite positively that milk from dairy farm No. 4 was never delivered to the Commons, that transfers from can to can or additions to cans delivered to the Commons were never made. The record of

sales from dairy farms and of purchases and sales on each day from September 1st to October 15th were compared. The results confirmed the statements made.

A careful study was made of all persons residing in and of those who had recently visited the premises of Andras Koesiczky, the results being entirely negative.

At source of supply, No. 1, the dairy farmer himself had had a suspicious illness about six or eight years ago and a mild attack of diarrhoea during May, 1914; all other persons residing on the premises gave negative histories. Examination of the physical conditions surrounding the source of water supply was negative and a serological examination of the blood of the dairy farmer was negative. Bacteriological examination of the water gave the following results:

Specimens collected
October 12, 1914.

	Bacteria per c.c.	B. Coli per c.c.
Well,	960	0
Cistern,	344	32
<i>October 14, 1914.</i>		
Well,	64	0

The cistern was used for cooling purposes only.

At source of supply No. 2, a negative history regarding typhoid fever was obtained. The physical conditions surrounding the spring milk house were suggestive of possible pollution. The cans were placed in the water for cooling and it was possible for the cans to have been open to contamination by manure from the barn yard.

Samples of water taken for bacteriological examination gave the following results:

October 12.

	Bacteria per c.c.	B. Coli per c.c.
Spring,	1320	0
Overflow from spring,	80	0
Surface specimen from spring,	160	0
Deep specimen from spring,	780	0
<i>October 14.</i>		
Surface specimen from spring,	112	0
Deep specimen from spring,	66	0

At source of supply No. 3, the history of the dairy farmer shows that he personally was the only one who had suffered previously with typhoid fever and that was thirty years ago. An examination of his blood was negative. The examination of the water supply was negative both so far as the physical conditions were concerned and bacteriologically.

Source of supply No. 4 was a local vendor, who sold a portion of his milk to Andras Koesiczky. He purchased milk from five different dairy farmers. These were investigated in the same manner as the supplies noted above and were uniformly negative.

If milk carried the infection to the patients in the University, it seems altogether probable that infection of the milk supply did not occur before it was delivered to the Commons. Evidence is lacking which would show that typhoid "carriers" handled the milk supply on dairy farms No.'s 1, 2, and 3, and in order for infection to have come from dairy farm No. 3, it would have been necessary for all patients to have been infected from one can of milk delivered on September 22nd and used at the evening meal. The morbidity as indicated in the dates of onsets does not confirm such a method of transmission. Were the latter true it would seem improbable that the dates of onsets should have extended over so long a period and likewise it would seem improbable that the earliest cases would have developed the onset of illness prior to October 1st with clinical manifestations earlier than October 7th or 8th. Source of supply No. 4 was excluded from consideration.

To attribute the outbreak to milk transmission infected before delivery would mean that the milk had been infected practically daily between September 16th and 26th and possibly over a longer period of time. There is no evidence that polluted water or vessels or that "carriers" existed at the places of production or on the premises of the local dealers.

At the Commons, the original containers were placed in ice-boxes and the contents dipped for use. It would seem improbable that repeated infection at this point should have occurred.

No person suspected to be a carrier served milk from these containers and milk as a transmitting agent was accordingly from consideration.

Ice Cream: The census showed that all the patients had eaten ice cream at some time within the period of transmission. All ice cream used in the Commons is made by its employees in the kitchen, usually by the baker and his helper. The cream is purchased from Helm's Creamery Company, who sell over one thousand gallons of cream a week in the Bethlehems and vicinity. The method of handling was investigated; all milk supplied to the Creamery is pasteurized by the "holding" method. The cream is then separated and is graded according to fat content. The cream is then pasteurized by the "flash" method (212°F.) The best grade of cream (No. 1) was purchased for use in the Commons.

From the history given it is possible that ice cream may have been infected by the flavorings in the process of manufacture; the only flavoring handled by the kitchen employees was peach. Peaches were purchased from a local dealer and were served in ice cream on three occasions, half a peck being used for flavoring on September 17th, half a peck on September 19th, and one peck on September 24th. In

the ordinary routine of making ice cream the peaches were first scalded by the baker and his assistant in order to remove the skins and these were then hand sliced by pantry girls. The distinct history was obtained from two colored male employees (silver polishers) that they had assisted in slicing peaches on one or more of these dates. If the ice cream were infected by a kitchen carrier it must have been through the medium of peaches on September 17 or 19th. A careful review of the methods of making shows it to be very improbable that an infection of ice cream had occurred through any other channel.

Ice: Ice is manufactured in the basement of the Commons from water supplied by the Bethlehem City Water Company. A modern equipment has been installed. Ice is never placed directly in beverages or foods; the water is colled by coils, which pass directly from the ice-plant to the kitchen and dining room.

Oysters: The use of oysters is shown in the following table:

	Cases.		Cases.
On September 18th,	6	Elsewhere,	2
On October 2nd,	4	Unstated,	6
On both dates,	21	None used,	15

Oysters were purchased twice after the opening of the Commons and before the date of investigation. These were seal-shipped in eleven gallon lots from one source in Baltimore, Md., and were served "panned" on September 18th and "fried" on October 2nd. In both instances they were served for the evening meal only, a time when the dining room census was lower than at any other meal. Because the steward insisted that they should be well done, oysters on both occasions were over-browned and there was no difficulty in having the date of use identified by each patient who had eaten oysters. Because of this and the fact that only twenty-seven of the fifty-four cases are shown to have eaten of these oysters, it would seem impossible that the oysters served "panned" on that date transmitted the infection. The oysters served "fried" on October 2nd were used by twenty-five cases, this date of use corresponding to the appearance of the disease clinically. For this reason, oysters were eliminated from consideration. Other shell fish had not been served.

Bread: Bread supplied to the Commons was for the most part purchased from the Freihofer Baking Company, Philadelphia, and a partial supply from the Sober Baking Company, Bethlehem. The possibility that bread had carried the infection unless infected at the Commons itself was minimal and an investigation of the Friehofer plant seemed to be unnecessary.

The Sober Baking Company employed twelve bakers, one night watchman, and seven drivers. All handled the bread and for that reason were studied with reference to previous attacks of typhoid fever. The only person found to have had a suspicious illness was one driver

who delivered bread to the Commons and to St. Luke's Hospital and who was reported as being ill for several weeks with a diagnosis of "stomach trouble." The family physician assured me that the patient was suffering with recurrent gastric ulcer. This driver likewise delivered to other customers throughout the Bethlehems and it seems unlikely that he should have been the cause of so high a morbidity of typhoid fever in the University without having a similar morbidity on other portions of his route.

If bread was the transmitting agent it was in the Commons service. Only pantry maids sliced (by machine) and served the bread.

Butter: Butter was purchased from Swift and Company's local warehouse. The latter receives several kinds of butter, but the supply sent to the Commons is shipped from the Chicago distributing house, known as Brookfield Butter. A carload is sent east each week and, of this, nine hundred to one thousand pounds are distributed in the Bethlehems by the local agency; two hundred pounds are delivered weekly to the Commons. At the latter place it is cut and placed in iced water from which it is served by the hands of the pantry maids to individual butter dishes.

Meat: Meat is purchased entirely from Swift and Company. All beef is shipped from Chicago and veal is purchased locally. Roast veal was served at the Commons. Other types of meat such as veal loaf and cooked meats were not served prior to the clinical appearance of the disease. If veal were responsible, it is probable that the infection would be by one of the paratyphoid forms or by the bacillus of Gaertner. Clinically and serologically the cases were infections with *B. typhosus* only.

Uncooked Fruits: These consisted of canteloupes, oranges, bananas, peaches, and apples. The first three were served as "extras" and it is shown by the records of dealers from whom the purchases were made and also appears on the books of the Commons that but two dozen of each had been purchased up to the time of the reporting of cases.

Peaches were used for flavoring ice cream and were served sliced. It is stated that two baskets were served sliced but once, i. e., on October 12th. The use of sliced peaches was this: Yes 17, No 26, Unstated 11. They were obtained from many sources, some of them being shipped from Phillipsburg, New Jersey, and other points near by, others being purchased from local farmers by green-grocers in South Bethlehem.

The only apples used were purchased from G. E. Smith, truck farmer in Salisbury Township, Lehigh County. Reference will be made to this below.

Uncooked Vegetables: These consisted of celery, lettuce, tomatoes, and cabbage. Celery was not served prior to September 24th and

then only on one Sunday evening in potato salad. Lettuce was used only for garnishing potato salad which (without celery) was served once each week. The use of potato salad (with lettuce) was as follows: Yes, 32, No, 14, Unstated, 8.

Sliced tomatoes were served frequently, an accurate record not being obtainable. The use of tomatoes was: Yes—38, No—8, Unstated—8.

Cabbage was served but once (with fried oysters on October 2nd) as pepper-hash, with a use reported as: Yes—13, No—32, Unstated—9.

These vegetables were purchased in the local markets, particularly from one dealer who in turn secured his supply from Philadelphia, and also from local truck farmers. Corn was purchased on one occasion from G. E. Smith, of Salisbury Township but, of course, was cooked before serving.

Night Soil: The steward had purchased apples and corn on several occasions from G. E. Smith, truck farmer, Salisbury Township, Lehigh County, who it was alleged had used night soil on his farm.

The information obtained from Mr. and Mrs. Smith, from a tenant farmer, from the steward himself, from the engineer of the water plant (located at the lower end of the farm), and from H. W. Repshur and Lester Bachman, who had contracted to remove the night soil, indicated that it was deposited only on the low lands at the lower end of the farm. During 1913 corn and during 1914 oats only were planted on this land. The tenant, a Hungarian, raises truck for his family using night soil for fertilization. He did not sell produce, either to his landlord or to local dealers. Had he done so the sales would have consisted of tomatoes and cabbage only. The dates of hauling and the addresses from which night soil was removed were checked against the use of products from this farm and it seems improbable that there was a relation of cause and effect between night soil on the Smith farm and the morbidity in Lehigh University.

THE COMMONS.

The Commons, a single large building, includes the dining hall, kitchen, pantry, bakery, ice and ice cream freezing plant, living quarters for the steward and family and also for certain of the employees, and the necessary store rooms. The building is heated by steam, is well ventilated, and thoroughly screened.

The equipment is modern in every detail with the exception (at the time of investigation) that the method for protecting users against polluted milk had not been installed. Transmission of infection by dishes has been rendered altogether improbable by a modern dish-washing machine and sanitary plumbing, protected garbage cans (removed daily), facilities for hand washing, individual towels, wash-

able white uniforms, bread cutting machines, and coil-cooled water and refrigeration provide adequate measures of protection. The steward, Mr. Smith, with his wife and daughter, occupy apartments on the second floor of the building. Mr. Smith has been engaged in such work on railroads and steamships and privately during most of his life. The skill with which he develops and conducts his work is evidence of his experience. His medical history and that of his family are entirely negative in so far as acute infections of the typhoid type are concerned.

The highest daily census in the dining room was two hundred and sixty-five, which number represents nearly the average meal census during the week when the infection was probably transmitted. Among these only one student was found who had a history of typhoid fever. Mechanical transmission from one diner to a large group was physically impossible but a careful review of all diners was made as a precaution and to set at rest rumors of such means of transmissions.

There are twenty-five waiters employed in the dining room, all of whom were members of the student body. The medical history of these with one exception was negative as to intestinal infections.

The employes were as follows:

Cook,	1	Baker,	1
Cook's helper,	1	Baker's helper,	1
*Dish washers,	2	Pantry help,	1
*Silver and glass washers,	2	†Pantry assistants,	3
Pot washer,	1		

Of the above employees eight were colored. In addition, the following had been employed between the dates mentioned:

Pantry boy, from Sept. 22 to Oct. 6.	Pantry boy from Sept. 11 to Oct. 2.
Pantry boy, from Sept. 10 to Sept. 17.	Pantry girl from Sept. 8 to Sept. 16.
Pantry boy, from Sept. 10 to Sept. 22.	

A carefully detailed history was obtained from each employee, the questioning covering all conditions simulating or likely to be mistaken for typhoid fever; specimens of blood were collected from each person. This work required several weeks as the former employees had removed to various other places. The results of the study were uniformly negative with the exception of one.

CARRIERS.

The elimination of all factors other than "carriers" was well defined early in the course of the investigation. The separate study of persons having had infections of the intestinal tract was made as early as possible.

Among the diners but one was found with a history of previous typhoid fever. F. J. G. developed the disease three years ago. The examination of his blood on October 14, was negative. He had habit-

*These also prepared vegetables and fruits.

†These also employed to arrange the dining room for service.

ually dined with one group of students, two of whom had developed typhoid fever. There is no evidence that he was the means of infecting these patients.

Of the twenty-five waiters all but one had negative histories as to typhoid fever. The exception, L. H., aged twenty-seven, had been in Porcupine, Canada, during portions of 1909, 1910 and 1911. During 1910 he suffered with epidemic dysentery lasting ten days. Typhoid fever had been epidemic in Cobalt, an adjacent town, during the previous year and in Porcupine during the same year. In both instances it was preceded by an epidemic of bacillary dysentery. His blood, collected on October 13, 1914, was negative with pathogenic members of the typhocolon group. The students developing the disease were not served by him. The distribution of morbidity in the dining room showed no marked localization.

Of the kitchen and bakery employees, only one gave a positive history. R. A., colored, twenty years of age, employed as a silver and glass washer and also as an assistant in preparing food, reported for duty to the Commons before its opening on September 14th, and was continuously employed up to the time of my investigation. He gave a history of an attack of typhoid fever during September of 1912 and a diarrhoeal disease associated with chilliness and fever lasting several weeks during September of 1913. During the early part of September, 1914, he again suffered with symptoms similar to those of the previous year but in a milder form and was not absent from work.

The physical examination showed him to be an under-developed male negro, under weight, probably having secondary anaemia, moderate exophthalmos associated with subacute conjunctivitis, enlargement of the lymphatic glands of the groin and axilla, but negative in every other particular.

The blood serum reacted as follows on the days named:

	Oct. 15.	Oct. 23.	Nov. 24.
<i>B. typhosus</i> ,	+	+	+
<i>B. paratyphosus A</i> ,	—	—	—
<i>B. paratyphosus B</i> ,	+	+	+
<i>B. paracoli</i> ,	—	—	—
<i>B. enteritidis</i> ,	—	—	—
<i>B. dysenteriae (Shiga)</i> ,	—	—	—

Feces and urine were shipped from South Bethlehem on October 19th and 22nd and from Lewes, Delaware, on November 24th and December 12th. Pathogenic forms were not found.

DISCUSSION.

It is evident from the accumulated evidence that food and water as originally delivered to the Commons were free from infection.

This outbreak of typhoid fever, which ended as abruptly as it began, was distinctly limited to persons associated with the University and, among these, to those dining in the Commons only. It is to be accounted for only on the assumption that food or water was infected after its receipt or at the time of preparation in the Commons.

Of two hundred and sixty-five diners (including twenty-five waiters), fifty-three and of sixteen persons living or employed in the building, one developed the disease within a period of fifteen days.

All these patients had become patrons of the Commons before September 23rd. The Commons had opened for service on September 14th. The dates of onsets were between September 28th and October 13th.

Based on these data it is apparent that all cases were probably infected between September 14th and September 29th; that an intermission in transmission occurred as is indicated on the morbidity curve shown above; and that but one person was the factor in infecting the entire group.

Of all persons in the Commons, R. A. is the only one with a positive history of typhoid fever showing a positive agglutination reaction with *B. typhosus* and *B. para-typhosus B*. The persistence of the reactions in high dilution (1:100) two years after the alleged attack of typhoid fever would lead one to suspect that he still harbored the pathogenic forms.

His relation to the outbreak give striking confirmation to this assumption. He was on duty when the Commons opened on September 14th; fourteen days later the onset or the first case of typhoid fever occurred among the students. The kitchen work was organized and adapted to the large number of patrons before October 1st. On or about that date the use of silver and glass washers for food preparation became less necessary. The onset of the last case was October 15th. R. A. was removed from kitchen service on October 20th, as soon as the report of a positive agglutination of his blood serum was received.

That this man was a carrier has not been finally proven by the recovery of pathogenic forms from his blood, feces, and urine. A blood culture was made in Lewes, Delaware, on November 24th with negative results. It was not possible to make fecal and urinary cultures on proper media either in South Bethlehem or Lewes. If pathogenic forms were present they were destroyed while in transit to the laboratory for examination. It is altogether probable that had it been possible to study his discharges under proper conditions, the micro-organisms would have been found.

Recent evidence in serological studies indicate that agglutinins continue to be present in the blood a long time after recovery from the clinical disease only when the patient continues to be the host of

living bacilli. In the case of R. A. two years elapsed between the diagnosis of typhoid fever and the serological studies here considered.

Positive findings in discharges are obtained as a rule only after repeated search. Your attention is called to the writer's report on the epidemic in Sellersville, Bucks County, during September, 1913. In this outbreak the carrier gave a positive serum reaction with *B. paratyphosus B.*, while the feces were positive only on repeated examinations. The history of recurrent diarrhoea in that case during each of seven summers following the clinical manifestation of the disease has its analogy in the recurrent diarrhoea of R. A. in the two Septembers following his original attack.

A.'s relation to food was intimate. While in his stated employment as a silver and glass washer he also assisted in the preparation of food, the most important of which was slicing of peaches for the manufacture of ice cream. As noted previously in the report peach ice cream was served on September 17th, 19th and 24th, dates included with the transmitting period of the infection.

In accordance with these findings, the epidemiological conclusion is the transmission of *B. typhosus* from a chronic typhoid carrier by means of food served in the Commons.

PROCEDURE.

The measures taken to prevent infection of further cases were limited to the Commons. The special action was to exclude the suspected carrier from further service, to establish a more rigid enforcement of rules regarding the personal hygiene of employees, and to install a temporary appliance for pasteurizing the milk. The last named was subsequently replaced by a modern pasteurizer.

The fortunate proximity of St. Luke's Hospital relieved the University from the need of establishing a temporary hospital or resorting to Dormitory treatment. Of the fifty-four cases, twenty-seven received treatment in St. Luke's Hospital. All others were able to travel to their homes during the prodromal stage.

The diagnosis was confirmed by studies on twenty-five cases made by the Hospital Pathologist; with his consent the following results are presented.

Total cases studied,	25
Agglutination reaction positive,	17
Agglutination reaction negative,	8
Blood culture positive,	4
Blood culture negative,	3
Blood culture not made,	18

All other pathological studies were made in the laboratories of the State Department of Health.

There were no secondary cases; primary cases ceased after the elimination of the carrier.

Your representative recommended the use of anti-typhoid vaccine as a prophylactic against future exposure to infection. Its use was adopted by the University authorities and recommendations made to all students. With the consent of parents or guardian, all students presenting themselves were vaccinated by the Consulting Physician to the University, Dr. William L. Estes, Jr. Your representative assisted in the first inoculations.

Under the direction of the Department of Physical Education, it is required that each student shall give his previous and present medical history and submit to a complete physical examination. The previous incidence of typhoid fever is noted. These records will probably prove valuable in future preventive work. A positive history in a student who is an applicant for service in the Commons will make it necessary for him to submit to serological and bacteriological examinations.

An order was issued requiring that similar examinations must be made of every applicant for kitchen, pantry, or other service in the Commons. In this Lehigh University is the pioneer among educational institutions. Correspondence with all other American Universities, with colleges, seminaries and schools shows that such supervision has not heretofore been exercised to protect student health. These activities result from the deep interest and initiative of Dr. Henry S. Drinker, President of the University.

REPORT OF AN INSPECTION REGARDING AN EPIDEMIC OF TYPHOID FEVER IN TOWER CITY.*

In accordance with instructions I proceeded to Tower City, Schuylkill County, on November 6, in order to review the factors giving rise to an epidemic of typhoid fever in that place. There is no record of cases reported in this community prior to September 21, 1914. On Friday, September 25, Dr. R. H. Stutzman, the medical member of the Board of Health in Tower City, telephoned to you, stating that a number of cases of typhoid fever had been reported, that he had reason to believe that the source of infection would be found in the water supply, and as a member of the Board of Health, he would meet an engineer if one were assigned to make an investigation.

*The investigations made by the Engineers are detailed in section 31 of the report of the Division of Sanitary Engineering.

Replying to this request, a preliminary investigation was made by Assistant Engineer R. B. Styer, beginning on the morning of September 28. Subsequent investigations were conducted by Mr. Styer and Assistant Engineer R. E. Irwin, the census and watershed work being performed by Sanitary Inspector T. B. Nicholson.

The history of the factors giving rise to the epidemic and of the present disquietude which exists in Tower City began with the infection of one Norman Bohr, aged eleven years, the son of Henry Bohr, living in Porter Township, Schuylkill County. The source of the infection for this particular case could not be discovered. The history of his illness shows the onset to have been on or about July 7. The clinical history of the case indicates that the course was decidedly atypical and probably presented one of the milder forms of ambulant typhoid, the usual clinical evidences, such as are given the greatest amount of consideration by rural practitioners, apparently being absent. He was first seen by Dr. R. H. Stutzman on July 31, who states that he failed to recognize the nature of the illness.

A brother, Amos Bohr, aged sixteen years, became ill on or about September 15 and was first visited by Dr. Stutzman on September 21. He established a diagnosis of typhoid fever and at that time became convinced that the case of Norman had been one of atypical typhoid. He states that at once he reported both cases to Health Officer Sutton, who had been temporarily assigned to have charge of that district. In a report dated November 10, Health Officer Sutton states that he has not received a report of the case of Norman Bohr.

In the meantime, cases of typhoid fever had been reported in Tower City. In his capacity as medical member of the local Board of Health, Dr. Stutzman made, on September 23, an investigation at the premises of Henry Bohr in relation to the water supply to the borough. The Water Company, in consideration for the use of the Bohr land, supplied water directly to the Bohr premises.

The pump station and well of the Water Company were located on this farm, the pump receiving water from two small streams flowing through an uninhabited watershed. In addition the Water Company was taking water directly from a stream which had its origin in Rush Township, Dauphin County, the shed of which had ten occupants with a considerable number of pollutions.

Dr. Stutzman had heard of an unreported case of ambulant typhoid fever some two miles distant on the banks of this same stream. The patient, a son of Jacob Gehres, Rush Township, Dauphin County, had visited his father's home while sick during April and May, coming from North Carolina.

In view of the history of the Gehres ambulant typhoid case, the evidence that direct pumpage was made from the stream by the Water Company, and the fact that the first two cases of typhoid fever coming

to his attention had occurred on the Bohr premises, Dr. Stutzman was led to the opinion that the infection was transmitted by water and that the Water Company should discontinue this source of supply as it was probably polluted. A demand to this effect was complied with on or about Wednesday, September 23. The Water Company, however, contended that the water was not the source of the infection. Investigations made by Mr. Styer at first led him to the conclusion that water might be the source but later he demonstrated that the infection had been transmitted by milk. This opinion was concurred in by Dr. Stutzman and apparently has been the opinion entertained by the residents since Mr. Styer's conclusion became public.

The superintendent of the Water Company and his social and business associates were incensed because of the public attitude resulting from Dr. Stutzman's requirements, resulting and this led to a longer continued discussion than would otherwise have followed. This was augmented by the taste given to the water by hypo-chlorite of lime and by the appearance of dead tadpoles and fish in the reservoir and taps.

It would appear that Dr. Stutzman has been treated with as the secretary of the Board of Health and has been placed in the light of an executive officer. The officers and members of the board are: President, George Seesholtz; secretary, Robert Heintzleman; Tim Berney, Dr. R. H. Stutzman; Health Officer, Daniel Grim.

Dr. Stutzman has vague ideas of general and local administration. This work was investigative and his reports were apparently made to the Board, for they seemed familiar with the essential features.

To recapitulate: Dr. R. H. Stutzman failed to recognize a case of typhoid fever occurring on a dairy farm first seen by him July 31. The occurrence of a secondary case on the same premises first seen by him September 21, led to a reconsideration of the first case and, according to his statement, the report of both to the Health Officer on September 21. The Health Officer, however, states he has not received a report of the first case.

On the day of placarding the premises, September 23, Dr. Stutzman made a preliminary investigation and on September 25 made an appeal to you for assistance.

The infected milk was discontinued on September 22, not by issuance of orders but by reason of previously announced plans of the milk vendor to discontinue his business on that date. In confirmation of this are the statements of customers relative to notices served some weeks prior to September 22 and the report of the Health Officer made on September 23 that milk and milk products were not sold from the Bohr farm.

The evidence indicates that Dr. Stutzman has not sought to avoid reporting cases, but that he failed in his diagnosis and that he is the only person in Tower City who promptly initiated and worked to control the sources of infection.

REPORT OF INVESTIGATIONS CONCERNING THE PREVALENCE OF TYPHOID FEVER IN HERSHEY.

In accordance with your instructions and accompanied by Dr. C. R. Phillips, County Medical Inspector, on November 2, I reviewed the factors responsible for the morbidity from typhoid fever in Health District 427, comprising Derry, East, West, and South Hanover Townships, Dauphin County.

Between February 4th and October 30th, there occurred forty cases of typhoid fever; of these thirty-five were in Derry, three in South Hanover and two in East Hanover Township respectively. The population of the principal portion of Derry Township, which includes the village formely known as Derry Church and now known as Hershey, is estimated to be twelve hundred. This high morbidity in an unincorporated community and also by reason of the only industry, the Hershey Chocolate Company, gave peculiar importance to the prevalence of typhoid fever.

The transmission of the infection was apparently entirely local. A directory of all cases in the order of dates of onsets was as follows:

MEMORANDA OF THE CASES.

	Age.	Township.	Onset.	Milk.	Reference.
1	8	Derry,	February 4,	Farm,	?
2	22	Derry,	April 18,	Dairy,	?
3	20	Derry,	June 14,	Wolf,	Gingrich Mill.
4	10	Derry,	June 28,	Shetter,	Gingrich and Hess.
5	14	Derry,	July 3,	Wolf,	Hess.
6	9	Derry,	July 3,	Wolf,	Hess.
7	39	Derry,	July 11,	Shetter,	See No. 4—Hess.
8	39	Derry,	July 12,	Farm,	?
9	23	South Hanover,	July 17,	Leshar,	?
10	29	South Hanover,	July 18,	Own,	Hess.
11	10	Derry,	July 20,	Wolf,	Hess.
12	15	Derry,	July 22,	Shetter,	Hess.
13	20	Derry,	July 25,	Wolf,	See No. 11—Hess.
14	10	Derry,	July 26,	Shetter,	?
15	22	Derry,	August 1,	Wolf,	Hess—See No. 3.
16	15	Derry,	August 2,	Wolf,	Hess.
17	40	Derry,	August 3,	Wolf,	Hess.
18	27	Derry,	August 4,	Wolf,	Hess.
19	21	Derry,	August 11,	?	?
20	22	East Hanover,	August 24,	?	?

MEMORANDA OF THE CASES—Continued.

	Age.	Township.	Onset.	Milk.	Reference.
21	33	East Hanover,	August 27,	Own,	Sec No. 10.
22	22	Derry,	September 4,	?	No data.
23	18	Derry,	September 24,	"	Adjoins Groff Farm. (Cases 10 and 21)
24	5	Derry,	September 26,	Wolf,	
25	47	Derry,	September 30,	Wolf,	
26	35	Derry,	October 1,	Wolf,	
27	22	Derry,	October 1,	Wolf,	
28	17	Derry,	October 1,	Wolf,	
29	18	Derry,	October 3,	Wolf,	
30	7	Derry,	October 3,	Wolf,	
31	46	Derry,	October 3,	Wolf,	
32	18	South Hanover,	October 3,	?	No data.
33	19	Derry,	October 4,	Wolf,	
34	16	Derry,	October 7,	Wolf,	
35	18	Derry,	October 8,	Wolf,	
36	54	Derry,	October 10,	Wolf,	
37	20	Derry,	October 14,	Wolf,	
38	8	Derry,	October 14,	Wolf,	
39	8	Near Hammelstown,	October 20,	Own,	Farm; Hershey School.
40	37	Derry,	October 30,	Own,	See No. 39.

It will be observed that typhoid fever has been continuously present in Hershey since June 14th, when Case 3 developed the disease. Where this patient acquired the infection has not been definitely determined. She is not known to have visited any other section than the neighboring borough of Palmyra but did use water from a well on the premises which, from all physical evidences was believed to have been polluted with sewage. The analysis of this water was not made until August 25th, on which date the total bacterial count was seventy to the cubic centimeter with no *B. coli*; subsequent analyses were not made.

It is apparent that all cases reported subsequently to Case 3 may be included in two chief groups, the one showing onsets during July and August, the other late in September and continuing throughout October. In studying the conditions common to these two groups, there is considerable overlapping and a careful review of available data does not make the picture clear. The evidence depends upon statements made by many who failed to recall the circumstances existing during earlier months and upon analyses of water supplies made long subsequent to infection.

First Group. Early important were the insanitary conditions existing on the premises of Case 3, in relation to ordinary hygiene and to the care of fecal matter from the patient. The excreta were not disinfected and were exposed to insects in such a way as to lead to the inference that fly infection may account for the first group of cases.

The analysis of all the cases from three to twenty-three inclusive, who became ill up to and including September 24th, shows that with

few exceptions the only common factor was the use of ice cream. The latter was handled by a local dealer, J. C. Hess, who sold in the portion of Hershey known as Derry Church, and to certain persons whose usual residence was in settlements some two and one-half miles distant, known as Union Deposit and Sand Beach. Of the twenty cases, fifteen had used this ice cream. The supply came entirely from Russ Brothers, Harrisburg, whose principal sales were throughout the city of Harrisburg as well as in a large number of the adjacent boroughs and villages. No other cases are traceable to this ice cream. If that sold by the local dealer was responsible, it was from fly infection carried from Case 3.

The source of infection of cases 8, 9, and 22 remains undetermined. Case 21 was secondary to Case 10 on the same premises, and Case 23 occupies the adjoining property to Case 10 and Case 21. There is reason to believe that the infection was transmitted through social relations and Case 23 may therefore be considered as secondary to Case 10. The remaining case (Case 22) lived on a farm in the lower part of Derry Township, a female, twenty-two years of age, for whom no definite source of infection could be found. The well water on the premises was analyzed in the Department's Laboratories, the total count of bacteria being thirty-six with fifteen *B. coli* to the cubic centimeter.

It is important to note that of the twenty-one cases, from Case 3 to 23 inclusive, nine had received their milk supply from a dealer in Derry Church, one C. H. Wolf.

Second Group. The second group of Cases 24 to 40 inclusive, showing dates of onsets between September 26 and October 30, have nothing in common except the use of the Wolf milk. The exceptions to this are Case 32 in South Hanover Township, unaccounted for, and Case 40, which was secondary to Case 39. The cases of this group were reviewed in the field by your representative in order to decide whether or not the infection had been transmitted by the milk sold by C. H. Wolf.

There are two milk vendors in Hershey: Shetter and Wolf. R. H. Shetter, Campbellstown, delivers about one hundred gallons a day and sells in the western end of Palmyra and in Hershey. Four cases of typhoid fever occurred in Hershey among the patrons of this route and are included in the first group. C. H. Wolf, of Hershey delivers two hundred to two hundred and fifty quarts a day. If the estimated population be correct, Mr. Wolf sells to about three-fourths of the total population or about seven hundred and fifty persons who use his milk supply. His sources of supply are:

Dan M. Stout, Derry Church,.....	{	Morning delivery, gallons,	7
		Evening delivery, gallons,	6
Jos. Cromas, Derry Church,	{	Morning delivery, gallons,	25
		Evening delivery, gallons,	22 to 23

The evening supply from both sources is mixed together and delivered early the next morning. The morning supply is delivered in the later hours of the same morning. On this second trip (with the morning supply) he delivers some forty quarts to a settlement of foreign-born families living at the eastern extremity of Swatara, twenty-five quarts to the Y. M. C. A. at Hershey, and the balance to the general trade.

In addition he received an occasional supply from J. A. Baumgardner, of Derry whose sales are as follows: Nearly one-half is taken to the Hershey Store Company, bottled, and sold to trade; about one-third of his total supply goes to the Hershey Cafe; and there is an occasional sale of fifty to seventy-five quarts to C. H. Wolf. What may be left of a daily supply, running as high as a hundred and twenty-five gallons, is shipped to the Hershey Cramery. A history of typhoid fever existing on the dairy farms supplying Mr. Wolf could not be obtained.

Ten of the cases studied lived in a restricted area to which Mr. Wolf delivered his milk each day on the first trip, at about 7 to 8 A. M. Assuming that the Wolf milk was the transmitting agent it would seem necessary by reason of peculiarities in distribution of patients and of the handling of Mr. Wolf's supply, to find a factor which would infect the milk delivered to him in the afternoon, bottled during the same afternoon but not delivered until the following morning. With a negative history for the persons employed at the sources of supply and for Mr. Wolf himself, who alone handled his milk, but two possible factors were to be considered, *i. e.*, a fly infection or a bottle infection, both of which were reasonable in the light of the evidence discovered.

The Wolf milk depot is located at the rear of his home in Derry Church. Within ten feet of the bottling room, the discharges of one of the cases of typhoid fever infected during May had been deposited for some two or three weeks. During the prodromal and early ambulant stage no attempt to sterilize the dejecta had been made, and as soon as she had recovered this custom had been resumed. An unused cesspool insufficiently covered with rails was situated in the yard adjacent to the bottling establishment and in it had been deposited the garbage and wastes of houses near by. No cases of typhoid fever occurring on such premises could be discovered. The bottling room was inefficiently screened and for all practical purposes might as well not have been screened at all. The bottles were cleaned with luke warm water and brushes. If flies transmitted infection from the vault of the adjoining premises to the milk bottles, only those bottles used for the early morning or first trip were so infected. No case was

reported to which milk had been delivered during the second trip, either through the restaurant or the Y. M. C. A., or among the foreign-born families near Swatara.

Approximately equal quantities, thirty to thirty-two gallons, were delivered during each trip but the first trip was for the most part to individual families.

On the other hand, among the first group of cases occurring between June 14th and September 24th, nine patients received the bottled milk from the Wolf dairy and with the inefficient method of cleansing, it is possible that the infection might have been transmitted through a bottle infection. This assumption would not account for the same peculiar distribution of cases noted above and in addition there would be the remote relationship between the group of cases occurring over a long period to the relatively larger group occurring during the month of October.

All other possible sources of infection for the unusual morbidity were excluded from consideration. Only those reasonable to entertain are presented.

It is impossible to give an exact opinion as to the source of infection but there is no doubt but that the first group was transmitted through the medium of ice cream handled under insanitary conditions by the local dealer and that the second group was transmitted through the medium of milk delivered by C. H. Wolf, and the findings of Dr. C. R. Phillips, County Medical Insector, are herewith confirmed.

REPORT OF AN INSPECTION REGARDING AN OUTBREAK OF TYPHOID FEVER IN MONESSEN.

In accordance with your instructions I studied on October 24, 25 and 26, 1914 the conditions alleged to be responsible for an outbreak of typhoid fever in Monessen Borough, Westmoreland County, which occurred between August 5th and October 12th, 1914.

The relation of the water supplied to the public by the Tri-Cities Water Company had been studied during September and October by Assistant Engineer C. L. Siebert. His investigations, terminated abruptly because of other and urgent work, showed that the public water supply was not at fault and indicated that private water supplies were the principal cause of infection. The public water supplies being excluded, other methods of transmission only are considered in this report.

Fifty-nine cases were studied which for the purpose of presenting details in relation to more than one source have been divided into two groups, the smaller one in the eastern portion of the borough, for the most part in the Second Ward, and a larger one in the western portion in the First Ward.

Monessen was organized as a borough during 1898. The population in 1900 was 2,197 and in 1910, 11,775, an increase of 436 per cent in ten years, and the place is still growing. This rapid growth was due to the establishment of large steel, tin plate, and wire mills, employing large numbers of foreign born males. The number of cases of typhoid fever bore no relation to the population except as a measure of excessive morbidity.

The distribution of population in accordance with nativity at the time of the census of 1910 was

Foreign born,	5475	Other,	235
Foreign mixed parentage,	3086	Native,	2979

The Slavish, Polish and allied tongues predominate in the languages spoken. This is indicated in the nativity of those having typhoid fever.

French,	3	Lithuanian,	2
Belgian,	1	Croatian,	2
German,	1	Hungarian,	3
Finnish,	2	Italian,	5
Russian,	4	American,	3
Austrian,	6		
Slavish,	17		
Polish,	10		
			59

Attention has been previously directed to the aversion which foreigners have for piped water supplies. This characteristic accounts for the typhoid outbreak here reported and the distribution according to country of origin, as noted in the above table, is in part confirmatory of this view.

The territorial distribution of cases is not to be accounted for on the basis of public water or of transmission by flies. When plotted on a map of the borough the cases appeared as forming two groups. One of these in the western section was fairly compact. The other in the eastern part contained fewer cases and they were more scattered.

The Eastern group is as a whole less readily accounted for. Foods were excluded as none were found which were either common to all cases or common to typhoid patients and not to the community as a whole.

Of all other methods of transmission, only contact, milk, and individual water supplies remain for consideration.

The dates of onsets in the Eastern group were:

August 25,	1	September 19,	1
September 4,	1	October 1,	1
September 7,	2	October 2,	1
September 12,	1	October 7,	1
September 15,	3	October 11,	2
September 18,	1		
			<hr/>
			15

The onsets would indicate a possible transmission by contact but this was not verified by a study of the relation of the patients. Eleven premises housed single cases, two housed two cases each.

Thirteen received milk from seven milk vendors, while two had used only milk from their own cows.

The relation of water is shown in the following:

Tri-Cities and various,	7
Tri Cities Water Co. and well at 141 Third St.,	5
Tri Cities Water Co. and well at 129 Seneca St.,	1
Tri-Cities Water Co. and well on Knox Ave.,	2
	<hr/>
	15

Of those classified as "Tri-Cities and various," three were secondary to other cases and three had visited the homes of cases in the Western group within the incubation period; one was not accounted for.

The analyses of the wells named was as follows for the dates of collection noted:

	Total Bacteria	B. Coli.
141 Third St.		
October 3,	4320	6
October 15,	7980	0
129 Seneca St.		
October 3,	160	1
Knox Ave.		
September 30,	191	3

The physical conditions indicated intermittent pollution from privy vaults to each well.

The Western group included forty-four cases, the dates of onsets being:

August 5,	1	September 21,	3
August 15,	1	September 24,	1
August 20,	1	September 25,	3
September 1,	1	September 26,	2
September 4,	1	September 27,	2
September 5,	1	September 28,	1
September 6,	1	September 29,	1
September 12,	2	October 1,	1
September 13,	3	October 2,	3
September 14,	3	October 5,	1
September 15,	3	October 8,	2
September 16,	3	October 10,	3
September 17,	1	October 12,	1
September 18,	1		
			<hr/>
			44

Of these twenty-eight cases resided on Highland Avenue within the limits of one square and ten cases within less than one square of that group.

In this district the housing conditions, briefly referred to above, were most marked, contact was promiscuous, and infection in boarding houses by food were probably factors in transmission.

Milk was supplied as follows:

Nine individual dealers,	9 cases.
Condensed only,	8 cases.
Own cow or goat,	5 cases.
Wanco Dairy,	14 cases.
Guerison Dairy,	8 cases.
	44 cases.

The Wanco Dairy was investigated with negative results. In addition, all of the fourteen cases using from his milk supply had also used well water known to be polluted and in use by other cases, while four cases are accounted for as secondary to other cases in the same houses.

The Guerison Dairy may have been responsible for a small group; of the eight cases using the Guerison milk, three had used polluted water. The onsets of two were prior to infection in the Guerison home at 1057 Highland Avenue.

On September 27 Case No. 30 became sick in the Guerison house, was nursed by Mrs. Guerison who also milked the cows and cooked for other boarders.

Mrs. Mary Guerison kept two cows averaging fifteen quarts daily and sold to twenty customers residing on Highland and Morgan Avenues between Tenth and Twelfth Streets. Among these five cases of the disease developed with onsets between October 5th and 10th inclusive.

The use of well water is the prominent characteristic for all cases. In addition to the supply of the Tri-Cities Water Company, the wells at 1021, 1029, 1041, 1045, and 1049 Highland Avenue had been used by twenty-four cases, while for twelve cases it was stated that they had used water promiscuously from many wells in the neighborhood.

The analyses of wells at 1029 and 1049 were not made. All of the cases, however, which used these wells had also used water from other wells in the group studied. The analyses of those in use by all of the twenty-four were as follows:

	Total Bacteria.	B. Coli.
1021 Highland Ave., October 3,	900	37
1027 Highland Ave., September 30,	2280	120
1041 Highland Ave., September 30,	720	13
1045 Highland Ave., September 30,	1080	0

Following recommendations made by Engineer Siebert, many wells were closed pending bacteriological analysis. The typhoid morbidity lessened within the incubation period following this action.

By request of the Board of Health I met with the members in the office of the Secretary, Dr. D. C. Farquhar. The powers and duties of a borough Board of Health were discussed and the suggestions for methods of local application were requested.

REPORT OF AN INVESTIGATION REGARDING TYPHOID FEVER IN SWISSVALE.

In accordance with your instruction I proceeded to Swissvale, Allegheny County, on October 27 in order to determine the cause of the typhoid fever existing in that borough. The preliminary inspection had been initiated by Sanitary Officer R. M. Souder in charge, the field work being performed by Sanitary Inspectors J. D. Marshall and D. M. Irwin.

The borough of Swissvale, irregular in outline, is surrounded to the west by Pittsburgh, to the north by the borough of Edgewood and Braddock Township, to the east and south by Braddock Township and the boroughs of North Braddock and Rankin. The population, according to the census of 1910, was 7,831. Since that year there has been a relatively small increase but for epidemiological purposes this is a negligible factor.

The Board of Health consists of: President, T. C. Rankin; Secretary, M. E. Reyneke; Clyde Campbell; Dr. L. N. Smith; E. H. Was-muth; and Health Officer, M. C. Buterbough. The work which was performed in the borough was the result of a formal request on the part of this Board and the details were carried out in conference with them.

A review of the usual census data follows:

Water. Water is supplied to the borough by the Pennsylvania Water Company. Plans filed in 1914 indicate that the following territory is served by this company, the total consumption averaging about eight and one-half million gallons daily: The Twelfth, Thirteenth, and Fourteenth Wards, Pittsburgh City; the boroughs of Pitcairn, Wilmerding, North Braddock, Swissvale, Wilkinsburg, Turtle Creek, East Pittsburgh, and Edgewood, and the Fourth Ward of Braddock; and in addition, all or portions of the following townships: Wilkins, North Versailles, Patton, Penn, and Braddock. There has been no unusual prevalence of typhoid fever throughout the districts mentioned, particularly none coincident with the period of the outbreak in Swissvale. All of the persons having typhoid fever in Swissvale used the Pennsylvania Water Company supply exclusively. By reason of the wide-spread distribution of this water supply without peculiarities of source of supply in relation to given points of distribution, water as a transmitter of infection was excluded from consideration.

Milk: The borough has never adopted ordinances relative to the milk supply. Data relative to the number of vendors and the sources

of their supplies were not recorded. After an investigation it was found that eleven or twelve individual vendors or milk companies distributed daily upwards of two thousand quarts of milk. Of this quantity some three hundred and forty quarts or at least one-sixth of the total supply to the borough was delivered by one vendor.

This vendor, C. H. Beighley, supplied the milk to upwards of three hundred and twenty-five families by means of two wagons, each covering a separate route. In addition he sold to the following:

Union Switch and Signal Works (employees),	16 to 18 quarts.
A. A. Redman, Bakery,	8 quarts.
H. A. Riddell, Grocery,	10 quarts.
Christopher Capo, Grocery,	2 quarts.
Hamilton Grocery Store,	4 quarts.
In his own Store,	8 to 12 quarts.
Bishoff & Bishoff, occasional sales,	40 to 80 quarts.

All the milk except the special supplies just named was bottled and was delivered by the two wagons to the following points:

Swissvale borough, very generally, the routes covering many streets in each of the districts.

Rankin borough, eleven or twelve quarts, for the most part on Milnor and Chartiers Streets.

Edgewood borough, five quarts, for the most part on Duquesne Avenue, Dewey Street, Maple Avenue and Elm Street.

Pittsburgh.—Black Hawk, Whipple, and Homestead Streets.

C. H. Beighley conducts a grocery store near the centre of the borough and is assisted by his daughter and two sons, aged fifteen and seventeen years respectively. A son Ralph, aged nineteen years, had also assisted up to July 25. Ralph had typhoid fever during the spring of 1906. In addition, Dewey Duquay, Duquesne Street, Swissvale, had been employed from July 25 to October 18, 1914. There is no history of gastro-intestinal infection in any one employed since July in the dairy service at this store.

The milk is bottled in the basement of the store from a five gallon, open-top, spigot tank. On receipt from the sources of supply, the shipping cans are placed in a cooler devised for the purpose, the day's supply being bottled, with the exceptions noted below, during the afternoon and are delivered during the next day.

The sources of supply have been as follows:

James Hood, St. Clair Township, Westmoreland County, who had supplied milk for three years, discontinued on account of train service on October 4, 1914; J. M. Hood, St. Clair Township, Westmoreland County, discontinued September 18, 1914, for the same reason; D. M. Fink, H. F. Berlin, W. H. Bush and J. J. Fink, all in Penn Township, Westmoreland County; Harry and Ralph Townsend, Unity Township, Westmoreland County; and G. W. Geiger, Franklin Township, Westmoreland County.

An inspection of these sources of supply, with the exception of James Hood and J. M. Hood, had been made on October 16 to 20 inclusive; the results were negative except on the premises of H. F. Berlin where a history that Mrs. H. F. Berlin had had typhoid fever was obtained. The milk from the two Hoods being discontinued on September 19 and October 4 respectively, a new source of supply from G. W. Geiger was contracted for on October 4.

All of the milk from these sources of supply was delivered by train to Swissvale where it was handled in the following manner: The Bush and Geiger milk was received at 8:29 A. M., was bottled and, for the most part, delivered to the Union Switch and Signal Works employees. What was left was added to the milk from all other sources which was received at 10:15 A. M. The J. J. Fink milk was always set to one side in order that the cream might accumulate and be skimmed for sale. This was practically an invariable rule.

The milk was bottled in the following manner:

The surplus from the Bush and Geiger supply and the Townsend Brothers supply was bottled first; as the container was emptied, the Berlin and Fink supply was added. The bottles were cased in wooden containers and distributed between the two wagons irregularly, no choice being made in the selection.

The important points are that the Hood and, subsequently the Bush and Geiger milk was, for the most part, delivered to the Union Switch and Signal Works employees in a sufficiently large quantity to give rise to the usual morbidity among its users employed in that works, if this milk were at fault; that the Fink milk was used for the purpose of securing cream; and that the handling of milk from all other sources was such as to have distributed infection from any one source throughout the entire milk route of the two wagons in use.

Of the thirty-two to forty persons using the Hood and subsequently the Bush and Geiger milk at the Union Switch and Signal Works, only two (Cases 17 and 25) developed typhoid fever. These received bottled milk at home delivered by C. H. Beighley's wagons.

If the infection was transmitted by milk it was evidently from the Townsend, Fink, or Berlin supply. As the only premises on which a history of typhoid had been obtained was that of H. F. Berlin, a reinvestigation was made by your representative on October 28.

The dairy farm of H. F. Berlin is located in Penn Township. The family consists of Mr. and Mrs. H. F. Berlin, four small children and the following employees: Mabel Kemmemer, aged seventeen, three years in service, with a negative history; Cal. George, age unstated, three years in service, negative history; Albert Opela, aged nineteen years, was employed during the summer and left the farm just before September 7, 1914. Efforts were made to locate this

employee without results and his history must remain in doubt unless his whereabouts can be learned. C. W., a graduate physician in failing health, had worked for Mr. Berlin for two weeks during the latter part of August and first part of September. He was located in his present place of employment at Mrs. Hart's in Export, Pennsylvania. According to a report from the County Medical Inspector, subsequent to the investigation, he is a graduate of the Western Reserve Medical School in 1905 and had typhoid fever in Cleveland in 1906, since when his health has been impaired. He developed appendicitis in 1912 and was operated on at the St. Francis Hospital in Pittsburgh for an abscess prior to that date. Whether or not this was a typhoidal abscess could not be learned. He gave a positive refusal for specimens of both blood and feces.

This history of all members of the family and of occasional visitors was negative with the exception of Mrs. Berlin, who states that she had what was alleged to be typhoid fever during July 1912. During her illness she was under the care of Dr. J. F. Sylvis of Harrison City. The premises were not placarded and were not disinfected. A specimen of blood was obtained on October 28 and forwarded to the departmental laboratories. The director reported that the Widal test was negative for *B. typhosus*, *B. paratyphosus A*, *B. paratyphosus B*, *B. paracoli*, *B. dysenteriae*, and *B. enteritidis*. She agreed to ship a specimen of feces to the laboratory; a container was provided but the specimen was not received.

The use of milk by patients in Swissvale is as follows:

Milk.		
C. H. Beighley,		20 cases.
C. H. Beighley and McKenley Store,		1 case.
C. H. Beighley and Snyder,		1 case.
C. H. Beighley and Frederick,		1 case.
Frederick and condensed,		1 case.
M. L. Scott dairy,		1 case.
M. L. Scott dairy and David Mitchell,		1 case.
McJunkin dairy,		1 case.
		27 cases.

Twenty-three cases used the Beighley milk alone or (three case) in combination. The four who denied using it cannot be accounted for.

The dates of onsets of the cases studied were as follows:

Dates of Onsets.			
September 7,	2	September 25,	3
September 9,	1	September 28,	2
September 19,	3	September 30,	4
September 20,	5	October 1,	2
September 22,	4	October 10,	1

Assuming that the Berlin milk was the sole source of infection the two groups of dates of onsets are accounted for. The probable carrier was Dr. C. W. whose period of employment on the Berlin dairy farm was such as to account for incubation periods of two groups of cases. The four patients who denied the use of Beighley milk had onsets between September 20 and 30.

The study of all other possible conditions bearing on the transmission of infection by milk gave little in confirmation. The occupation of twenty-one (seventy-eight per cent.) was distinctly in home relations, only six being adult males having work away from home.

There was an even distribution between the two sexes. Nine or thirty-three per cent. were under the age showing the greatest susceptibility which, taken in consideration with the occupation would suggest that the transmitting agent was something used commonly in the home rather than abroad. Of such agents, water, of course, has been excluded.

A study of ice cream demonstrated that fifteen (fifty-five per cent.) had not had it within thirty days before illness. Twelve purchased from five sources.

The ice in use was purchased from dealers who sold nothing but manufactured ice. Ten denied the use of ice. None had used oysters and only three had had uncooked vegetables and fruit.

Because of the exclusion of all other possible agents of transmission the diagnosis of the source of infection was limited to milk. The results of inspection indicate that the product of H. F. Berlin's dairy farm in Penn Township, Westmoreland County, was the transmitter and that one Dr. C. W., now of Export, is a probable typhoid carrier. It is possible that a small number of the later cases may have been secondary cases.

Details necessary to give a concise opinion, an outline of additional administrative measures and recommendations for the adoption of milk ordinances were presented to the members of the Board of Health on October 28, 1914.

INSPECTION OF TYPHOID FEVER IN KITTANNING.*

Concerning the recent outbreak of typhoid fever in Kittanning Borough, Armstrong County, I beg to report that a total of eighty-nine cases of the disease came under my observation, the dates of onset being as follows:

Oct. 4,	1	Oct. 10,	1	Oct. 25,	1-7
Oct. 6,	1	Oct. 12,	1	Nov. 2,	1
Oct. 8,	1	Oct. 17,	1	Nov. 8,	1

*The activities of the engineers in connection with this outbreak are detailed in the double section, 26-27, of the report of the Division of Sanitary Engineers.

Nov. 12,	3	Nov. 22,	3	Dec. 1,	3
Nov. 14,	3	Nov. 23,	6	Dec. 2,	2
Nov. 15,	1	Nov. 24,	2	Dec. 3,	2
Nov. 16,	3	Nov. 25,	7	Dec. 4,	1
Nov. 17,	4	Nov. 26,	4	Dec. 5,	2-10
Nov. 18,	4	Nov. 27,	11		
Nov. 19,	5	Nov. 28,	6	Total,	89
Nov. 20,	2	Nov. 29,	3		
Nov. 21,	2	Nov. 30,	1-72		

In addition to the above, nine cases of the disease in Manor, Rayburn, Kittanning, and East Franklin Townships and included in my annual report, were traceable to the same source.

In a further study of the eighty-nine borough cases they were found to be quite evenly distributed throughout the town.

The age and sex follow, and bear out the usual ratio with the exception of a slight excess between the ages of five and nine and from ten to fourteen years.

Age.	Male.	Female.	Total.
0-4,	1	3	4
5-9,	13	7	20
10-14,	13	9	22
15-19,	10	2	12
20-24,	8	6	14
25-29,	4	4	8
30-34,	2	1	3
35-39,	0	0	0
40-44,	0	0	0
45-49,	1	0	1
50,	3	2	5
Total,	55	34	89

Occupations were found to be:

School child,	48	Barber,	1
(Second Ward,	22)	Coal Miner,	1
(Fourth Ward,	18)	Express Agent,	1
(High School,	5)	Foreman Brick Plant,	1
(St. Marys,	3)	Glass Worker,	1
Housewife,	8	Installer,	1
Laborer,	7	No occupation,	1
Child,	5	Shoemaker,	1
Domestic,	3	Stenographer,	1
Potter,	3	Traveling Salesman,	1
School Teacher,	2	Waiter,	1
(High School,	1)		
(Fourth Ward,	1)	Total,	89
Carpenter,	2		

The High School building adjoins the Second Ward building in North McKean Street, and its pupils come from all parts of the town, St. Mary's School is located in North Jefferson Street, and likewise draws from all parts of the town.

The death rate in the epidemic was lower than the average mortality from this disease, but corresponds very closely to the rate in private

practice to which all these cases belong. The age, sex and day of disease on which death occurred is given below:

Age.	Male.	Female.	Day of Disease.
6,	0	1	19
11,	1	0	37
12,	0	1	34
13,	1	0	26
18,	1	0	27
29,	0	1	43
30,	1	0	41
65,	1	0	54

Note: Two patients developed pulmonary tuberculosis, and one of these died after the date of this report.

In searching for the cause of the epidemic, the use of ice cream, shell fish, uncooked vegetables, and other occasional carriers of infection, was found to be so limited as to be safely eliminated.

Ice was used by but nineteen of the eighty-nine patients. Of these Kenner Brothers had supplied fifteen, the Elk Brewing Company three, and the Kittanning Brewing Company one. All these firms manufacture their ice from distilled artesian well water.

The relative frequency among children would naturally direct suspicion to milk as a causative factor, but a careful inspection of the various sources of supply, coupled with the data as to distribution given in the following table, fully exonerates it also:

Foster Bros.,	17	A. McCullough,	3
G. M. Walters,	14	S. Slagle,	3
Condensed,	10	George Cupps,	2
H. Rau,	8	Joe Fritz,	2
Fred Rau,	7	C. W. Morrow,	2
Mrs. Bowser,	4	Armstrong Bros.,	1
None,	4	W. Dowling,	1
M. A. Campbell,	3	W. A. Foster,	1
J. Dodds,	3	W. J. Rodgers,	1
Wm. Gallagher,	3		

This brings us up to the study of the water supply used by these patients for a period of thirty days prior to their illness which was found to be:

City only,	35	City and Sheridan well,	1
City and springs,	9	City and Nulton spring,	1
City and school wells,	41	City and spring at Ford City,	1
City and Sloan well,	1		

The water designated as "City" in the above table is supplied by the Armstrong Water Company and drawn from the Allegheny River. Description of the Water Company's plant, borough sewerage system, and all engineering factors in connection with the epidemic, will be dealt with in the report of Assistant Engineer Parke, who was detailed to work in conjunction with this office, so it is unnecessary to touch on them here. I might say, however, that the school wells are drilled and properly protected, and repeated examination have invariably shown them to be free from pollution.

Two of the early cases included in the foregoing tables were employed during the day, for sometime prior to their sickness, at the

plant of the Allegheny River Mining Company in North Buffalo Township, and in common with other employees used water from some of the five springs on their property, near the plant. Samples were collected from all five of these springs September 27th and again on October 15th. Of the first series, one showed the presence of colon bacilli, and they were found in three of the samples collected on the latter date.

During the latter part of the first week of November members of my household complained about the condition of the water, particularly Saturday evening, November 7th, when I was at home for dinner. After my return to the office I was about to call up the Water Company's office when Mr. H. H. Weylman came in to complain about the water and said he understood the filtration plant was out of commission. I immediately called the Water Company on the telephone and was answered by the bookkeeper, Miss Hague, who after some hesitation admitted that the filters were shut down, and said that the superintendent, Mr. Turping, would be in the office in a few minutes and she would have him call me. He did not do so, but in the course of about twenty minutes presented himself at my office and seemed very much surprised that I should complain about the quality of the water as "the river was nice and clear and he did not see how the water could possibly be bad." In the course of further talk along this line he admitted the filters had been out of service for over a week, (he later fixed the time as beginning October 30th and ending November 30th). When I asked him why he had not notified us (the consumers) of the fact he replied by saying that he had mentioned such procedure to the General Superintendent, Mr. Walker, when he was here, and Mr. Walker replied "what the public doesn't know won't hurt them." The indifference of Mr. Turping, backed up by the expressed disregard of his superior for the welfare of their patrons, seemed to make further talk on the subject useless, but I took occasion to tell him rather pointedly that their negligence *would* hurt the public and probably their company, in the form of an epidemic of typhoid fever within the next three or four weeks, and suggested that they make an effort to rectify their mistake by notifying the public of the exact condition of affairs *at once*. This he promised to do, but delayed, doubtless to communicate with his superior at Scranton, until the following Wednesday, November 11th, when there appeared in the local daily press this,

"NOTICE TO WATER CONSUMERS

The Armstrong Water Company is now making necessary repairs and improvements to part of its plant on the hill, and while the water is sterilized and every precaution is being taken to make the water absolutely safe for domestic purposes, it is suggested as an extra precaution that the people boil the water. Further notice regarding the completion of the above improvements will appear in this paper in about ten days.

THE ARMSTRONG WATER CO.,
per J. P. TURPING, Supt."

After Mr. Turping left my office Saturday evening I called Mr. C. K. Leard, Secretary of the local Board of Health, on the telephone and apprised him of the existing conditions, and suggested that the Board advise the public of the state of affairs, together with instructions for protecting themselves. In this connection it is gratifying to note the rapidity with which infections ceased as soon as the public found the danger they were in, and were advised of precautions to be taken. From this time forward I had frequent conferences with the members of the Board of Health and gave them every possible assistance.

On the evening of December 10th in company with your Associate Chief Medical Inspector, I attended a joint meeting of the town council, Board of Health, burgess, and borough solicitor, when Doctor Hunt went over the situation in detail, basing his remarks on the eighty-one cases that had been properly tabulated and studied at that time. Dr. Hunt remained until Sunday evening, assisting in stamping out the epidemic, and will make special report of his findings.

That this epidemic was the direct result of gross negligence on the part of the officials of the Armstrong Water Company is without a doubt in my mind, and their monumental indifference to the health and lives of their patrons was shown by their refusing to notify the public of the truth so the people might take care of themselves.

INSPECTION OF TYPHOID FEVER IN FORD CITY.*

On Saturday morning, November 28, I received a telegram from your Chief Medical Inspector, directing me to investigate the unusual prevalence of typhoid fever in Ford City borough, Armstrong County, and immediately proceeded to that place.

Ford City is a thriving industrial town, laid out by the J. B. Ford Glass Company, in 1888, and owned by that corporation and its successor, the Pittsburg Plate Glass Company, until 1896, when the sale of lots was commenced. It was incorporated as a borough in 1898, and has a population of about 5,000 people.

On the west the borough line is formed by the Allegheny River for a distance of one and one-half miles. The south, east and north lines describe an irregular semi-circle following in the main except

*The activities of the engineers in connection with this outbreak are set forth in the double section, 26-27, of the report of the Division of Sanitary Engineering.

on the north an abrupt bluff which rises to about a hundred and eighty feet. The northern boundary is a broken line running from the bluff to the river, a distance of eighteen hundred feet.

The Pennsylvania Railroad parallels the Allegheny River at an average distance of four hundred feet from its east bank. The immense works of the Pittsburg Plate Glass Company, are located between the railroad and the river.

The entire building area of the borough is low bottom-land having been at one time the bed of the river. The extreme eastern portion is a swamp, at present obliterated in places by recent fills. It is subject to frequent overflows from the river, the worst being in March, 1913, when the entire town, with the exception of a small area in the vicinity of Fourth Avenue and Eleventh St., was inundated.

At places the water was upwards of twenty feet in depth and flooded the second floors of buildings. Immediately after the flood, under the direction of this office, a vigorous, systematic, town-wide clean-up campaign was inaugurated and carried out so successfully that in the succeeding weeks not a single case of illness was traceable to the disaster.

Mr. S. R. Parke, Jr., Assistant Engineer, having been detailed to work in conjunction with this office, a description of the water supply and sewerage systems will be made by him in his own report.

Records of the occurrence of typhoid fever in the borough are only available back as far as August 1st, 1912. The record by months from that date follows:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1912, .....	..	..	..	..	..	..	..	1	..	2	1	3
1913,	3	7	1	..	2	2	2	4	10	5	4	8
1914,	4	2	..	1	..	5	2	4	1	8	45	5

The health officer is an employee of the American Natural Gas Co., and by reason of his occupation is personally acquainted with almost every resident of the borough. He is also quite familiar with conditions in and about the homes, and the occupation and habits of the residents so that he was able to give me a very comprehensive description of the situation. In going over the matter with him, I found he had a list of ten cases of typhoid fever recently reported in writing by physicians. In addition to these he had a list of twenty-four names of persons that had been reported to him verbally by various persons as having the disease. He was instructed to see that all cases of typhoid fever, and other communicable diseases, were reported in writing, as required by law. This instruction he carried out promptly. From the information obtained from the health officer, suspicion was directed to the municipal water supply as the cause of the present outbreak of typhoid fever.

The Board of Health is constituted as follows: D. H. Houston, President; William Swigart, Charles Hutchison, John Bower, Dr. D. I. Gairth, F. H. McNutt, Secretary; H. E. Flatt, Health Officer.

On visiting the office of the secretary it was found the board had not met since July 25, 1914. At my request a special meeting was called for that evening which was attended by Messrs. Hutchison, Swigart, and Gairth. The secretary and health officer were also present. By reason of the sudden death of a near relative I was not able to attend the meeting, but the following suggestions given to the secretary and health officer received the favorable consideration of the board: That the municipal water supply was the probable source of infection; that notice be given the public through the newspapers and by hand-bills to boil all water used for domestic purposes; to see that all cases of communicable disease were reported in writing by the attending physician; to placard in accordance with the regulations of the Department of Health and to supply the householders with proper literature; to have the sanitary conditions at the various homes carefully investigated when placarding and to have defects remedied promptly; carefully to supervise the sale of milk in the borough; and finally, to hold frequent meetings and inaugurate a general clean-up movement. They were also told that a representative of the Engineering Division would probably soon be on the ground, who would advise them and the borough council in installing at least a temporary hypochlorite plant, and regarding such other matters as should be revealed by a further investigation.

By the time Mr. Parke and two inspectors of the Engineering Division arrived the health officer had got in a sufficient number of reports so that the work of making a census and study of the individual cases could be taken up. This study was based on a total of fifty-six cases reported up to and including December 3rd, the dates of onset being as follows:

September 26,	1	November 4,	1	November 18,	2
October 7,	1	November 6,	1	November 19,	2
October 10,	1	November 7,	5	November 21,	2
October 18,	1	November 8,	7	November 23,	1
October 20,	1	November 9,	2	November 24,	1
October 21,	1	November 10,	3	November 26,	1
October 22,	1	November 11,	1	November 27,	1
October 27,	1	November 12,	5	November 29,	1
October 30,	1	November 13,	1	November 30,	1
November 1,	3	November 14,	1	December 2,	1
November 3,	2	November 17,	1	December 3,	1

The water supply of these patients was found to be derived from six different sources and confirmed our suspicion as to the source of infection, as indicated by the following summary:

Municipal supply only,	21
Municipal supply and fountain spring (P. P. G. Co.),	21
Municipal supply and school well (public),	11
Municipal supply and well at 115 Seventh Ave.,	1
Municipal supply and well at Fourth Ave. and Thirteenth St.,	1
Municipal supply and Armstrong Water Co., (Kittanning),	1

Samples of water were collected November 30th and forwarded to the Laboratory of the Department for examination.

	Bacteria per c.c.	B. Coli per c.c.
No. 1. Water from Public School well,	120	0
No. 2. Water from Fountain (P. P. G. Spg.),	4	0
No. 3. Water from Tap, No. 602—Fourth Ave.,	144	12
No. 4. Water from Tap, No. 501—Fifth Ave.,	480	20
No. 5. Water from Tap, No. 1038—Fifth Ave.,	2,500	27
No. 6. Water from Tap, No. 1201—Sixth Ave.,	480	16

The four tap samples are from the municipal supply.

The milk supply was found to be derived from twenty-five different sources viz:

Roy Bowser,	11	Dumont,	1
Campbell,	9	Augustine,	1
Hromandek,	5	Rehak,	1
F. Iseman,	4	Camp,	1
Own supply,	4	Trogan,	1
Condensed,	4	Petroski,	1
Unknown,	3	Miller,	1
Mike Beck,	2	Heilman,	1
Mokar,	2	Pecan,	1
Popchek,	2	None,	1

The above sources of supply were all investigated with negative result.

The use of ice, ice cream, shell fish, raw vegetables, etc., by the patients prior to their illness was so limited as to eliminate them as causative factors.

A study of the age and sex gave the following interesting data:

Age.	Male.	Female.	Total.
0-4,	4	4	8
5-9,	5	9	14
10-14,	2	6	8
15-19,	2	2	4
20-24,	4	3	7
25-29,	7	1	8
30-34,	1	2	3
35-39,	1	1	2
40-44,	0	0	0
45-49,	1	0	1
50-up,	0	1	1

The occupations of the several patients were found to be:

Public school children,	13
Children under school age,	12
Glass workers,	8
Housewives,	6
Laborers,	5
St. Mary's School,	3
Domestics,	3
German School,	2
Bridge worker,	1
Carpenter,	1
Clerk,	1
No occupation,	1

In addition to the fifty-six cases embraced in the foregoing study, by calling on the physicians of the town and having them go over their visiting lists, I found that they had treated a total of twenty-eight

cases of intestinal infection of more or less severity but not diagnosed as typhoid fever. All were treated during the latter part of October and the month of November. All have fully recovered and an investigation of the individual cases was not undertaken, but the physicians were advised of the ruling of the Department in reference to reporting Paratyphoid to the health officials.

As you will, no doubt, be advised in the report of the Engineer that a temporary plant for the treatment of the water supply was installed, I am of the opinion that the citizens will be in constant danger of a repetition of what they have just passed through until the water system has received a complete overhauling, and the installation of a plant constructed along modern lines.

INSPECTION OF TYPHOID FEVER IN RADNOR TOWNSHIP, DELAWARE COUNTY.

In accordance with your instructions received on November 10, 1914, I made an investigation of typhoid fever in Radnor Township, Delaware County, the results of the investigation being as follows:

John Henry, of Wayne serves about two hundred quarts of milk in St. David's, Wayne, and Mount Pleasant in Montgomery County. He buys his supplies from four dealers, namely: McKinley, Brown, Jaquette and Usher. There have been four cases of typhoid fever on his route in Wayne since August 1st.

Mr. Henry's spring house has a tenant living over it. His whole system is second class and the water analyses made in the Philadelphia Clinical Laboratories show that his spring water is grossly polluted. His milk is served in bottles but, so far as I can determine, bottles were not removed from typhoid infected houses.

Of the sources of supply, Mr. McKinley has an antiquated spring cave. The water for his house, which also passes into this cave, comes from a spring located on the premises of Mr. French, half a mile away. This water is allowed to flow in and out of the cave and into it flows the drainage from the kitchen which is emptied on the surface of the ground. It is true that this has no bearing on the case.

Mr. Brown's dairy farm was entirely negative from examination.

Mr. Jaquett's farm was not investigated by me as it had already been investigated by Dr. C. W. Lincoln, with negative results.

Mr. Usher lives near King of Prussia in Montgomery County. His field is traversed by Martin's Dam stream and somewhere along the stream a run is taken off in order to bring the water down to his kitchen door and also to a small dam or pond near the house in which he operates a ram. The water is raised by the ram into the house of Mr. Rahn, which in probably all a matter of record since there are now five cases of typhoid fever in this house of about a month's standing, under the care of Dr. Miller of Wayne.

At the Usher house they have a cave with a sink and at one time this Martin's Dam Run supplied water for cooling purposes. At the time of my visit it was stated that they used water from the pump. This pump water comes from a deep well some twenty feet from the side of the stream. The stream, running by the door yard is much more convenient than any pump and on two occasions of which we have record, the farm boy was seen washing his hands there and this is probably a frequent occurrence.

I understand that one of the engineers of the Department made an investigation of the pollutions of the Martin's Dam stream.

The outbreak at Wayne had been only an occasional infection as the four cases extend over a period of almost as many months. They are in no way contact cases and are all on Henry's milk route. There are no other cases along any other route in Radnor Township. With the occurrence of five almost simultaneous cases in the family of Mr. Rahn who use the stream water from the front of Mr. Usher's house, with the possibility of cattle wading in this suspected stream, with farm hands washing their hands in the stream and imperfectly drying them before going to the stable to milk, as I saw yesterday I think we can believe that the transmission came from this source.

I have required the following regulations to be observed: All cans, strainers, cloths, buckets must be boiled and nothing but boiled water is to enter any of these containers. I have also required that Mr. Usher use boiled water at the barn with which to wash the cows' udders and the milkmen's hands. Mr. Henry has promised to put in a bottle sterilizer, but this, of course, would not help much with the milk polluted at the source.

I believe a thorough investigation should be made of the Martin Dam stream through the Engineering Division. A report of previous inspections showed the presence of two pollutions on this water-shed, both of which were ordered abated.

On November 16th I received your reply stating the following:

"Your report coincides with a report made by Dr. Whitcomb relative to an investigation at King of Prussia on account of typhoid fever occurring in a family whose drainage runs directly into Martin's Dam. The matter of further investigation and correction of drainage into Martin's Dam stream has been referred to the Chief Engineer for his immediate action."

Four months later, Dr. Lincoln reported that they had no other cases of typhoid fever in Radnor Township.

REPORT OF OUTBREAKS OF TYPHOID FEVER AT DREXEL HILL, UPPER DARBY TOWNSHIP, DELAWARE COUNTY.

On September 4th I received instructions from your office stating that Agnes and Harry Koch had been sent from Drexel Heights, Upper Darby Township, to the Presbyterian Hospital, Philadelphia, on August 31st, suffering with typhoid fever. Upper Darby is a first class township, the Secretary of the Board of Health being William Pendlebury.

On September 8th I reported the results of my first inspection, stating that I had found five unplaced cases of typhoid fever, one of which lived in a spring house on the dairy farm of Mr. Burnley, a local milkman. At the time of the inspection this patient had been removed to the home of his mother on Clifton Heights.

A recapitulation of the cases is as follows:

Mrs. Agnes Koch was sent to the Presbyterian Hospital on August 31st, followed in a day or two by her son Harry, and later by her sister, Mrs. Ella Kunkle. Previous to this, Jessie Warren, aged eight years, at the time living at the home of her grandfather, Mr. Huhn, but who had been visiting back and forth between points in New Jersey and Drexel Heights, had been ill, being I believe the first case of typhoid fever among those studied. Her illness was followed in a short time by that of the Koch family living across the street. The last case was that of Howard Burnley, aged thirty years, milkman, who was removed from the spring house mentioned above to the home of his mother on Diamond Street, Clifton. Mr. Burnley at one time served all these people with milk but I was informed by Mr. Huhn that he had not served them for three weeks; and Mr. Burnley informed me that he had not served Mr. Huhn for six weeks. I do not know which is correct.

Mr. Burnley also served milk in bottles and had recently been serving a Mrs. Jarvis who was ill with typhoid fever at the time. From all of the investigations made it would seem that he could easily have got his bottles infected both there and at the Warren premises, because he had served milk in bottles at both premises. He handles about two hundred quarts of milk a day. If his general milk supply had been infected he would in all probability have had a great many more cases on his route. No other local source of infection could be found.

On October 1st I received from you a letter written by the secretary of the Board of Health for Upper Darby Township reading as follows:

"During the last two or three weeks there appears to be some kind of an epidemic of typhoid in Upper Darby Township in the Drexel Hill district chiefly, and up to this writing, we have been unable to locate the source.

"Some of the patients have been sent away to the hospital. I have been authorized by this Board if you could possibly help us out in this, or suggest something or some plan we might be able to follow out, or send an expert to the district we would appreciate it very much.

"Very few of these cases have been reported to us by the doctors in charge, but have been reported by the citizens verbally. We are of the opinion that the doctors in charge are in a great measure to blame for not reporting these cases in writing immediately after being called on any case. Our Health Officer is doing all he can to trace the cause of the disease. We, therefore, await your advice in the matter."

On October 2nd I made a report on the situation as it had developed to that date, and have quoted it in part below. There were ten cases in Drexel Hill as follows:

"Henry W. Koch, sent to a Philadelphia Hospital (Presbyterian); Harry Koch, a son of the above, also in a Philadelphia Hospital; Ella Kunkle, a sister of Mrs. Koch, also in a Philadelphia Hospital; Jessie Warren, grand-daughter of Mr. Huhn, at his home in Drexel Hill; Howard Burnley, removed to the home of his mother in Clifton; Miss Cannon, now in a Philadelphia Hospital (Presbyterian); Arthur Miller, six years, now in the Women's College Hospital (Philadelphia); Jack Hower, a child, at the home of his parents, Drexel Hill; Mr. Lightfoot, at the Medico Chirurgical Hospital, Philadelphia; Mrs. Arthur Garret, at her home in Drexel Hill.

"I also wish to record the case of Miss Jarvis, of Lansdowne, who may also be a factor in the Drexel Hill outbreak, since she was also served with milk by Mr. Burnley, of Drexel Hill."

Suspected Sources of Infection from Data Accumulated.

First. Water. Water is supplied by the Springfield Water Company. This is under the constant surveillance of the State Department of Health and covers so large a territory that the distribution of water alone would exclude it from suspicion as the means of transmission. Samples of water from the spigots in the infected homes, as well as from the spring, the run, and the ice pond at Burnley's should be examined for B. coli. There were twelve dead ends on the water supply but the water analyzed from the spigots in each of the eleven infected houses showed a moderately low bacterial count with no B. coli. The examination of the water supply about Mr. Burnley's dairy farm, made on two different dates, showed the following:

	October 20.		November 2.	
	Bacteria	B. Coli	Bacteria	B. Coli
Upper spring,	64	2	11	4
Milk house,	44,280	0	144	0
Pond,	1,200	0	789	30
Lower spring,	112	0	20	0
Run below spring,	1,500	13	5,520	9
House supply, well,	26	0	4	0

The ground below this spring was connected with a branch which drained the springy ground near the post office.

Second. The Milk Supply. There are three milkmen who served most of the inhabitants:—Woolman, who serves pasteurized milk; George Burnley, who serves to about fifty customers in Drexel Hill, and to an indeterminate number of persons in Lansdowne; and finally, George Gaul, who serves about fifty quarts in Drexel Hill, about one hundred quarts to Burn Brae and the remainder of his daily output to the McKisseck Brothers at Yeadon.

Third. Ice Cream. The local dealer, Mr. Slack, purchases all of his supply in Philadelphia. He also takes from five to ten quarts daily from Mr. Burnley for household and “milk shake” use, while the local druggist uses as much as fifteen quarts of Mr. Burnley’s milk in making milk shakes. It does not appear that these patients had been infected by drinking milk shakes and cases did not occur in the families of Mr. Slack or the druggist.

Fourth. Sewage Disposal. There are no sewers in this part of the township. There is complaint that some of the people are careless about emptying their cesspools when they are filled. There were recently some instances of overflowing cesspools and of the use of the contents for fertilizing purposes, principally on gardens and shrubbery. This was admitted on one premises. It does not seem, however, credible to me that the occasional use of this material on a private garden or lawn could have caused the outbreak. The cesspools in the immediate neighborhood should be inspected and those overflowing should be emptied and all parties warned against the use of night soil as a fertilizer.

I quote from a report on the cesspools to show how easily the run, based on facts referred to above, and which travels through Mr. Burnley’s meadow, could become infected with sewage: “I learned yesterday that Upper Darby has made one attempt and is now about to make another attempt at the coming election to vote upon the question of sewers, but if they do not succeed in getting a sewage system for Drexel Hill at the November election, they will need some more practical method of handling their sewage than they have at present. All this hill top is so constituted that when the ground is thoroughly soaked, the cesspools become active wells and some of them overflow. In other words, there are not any tight cesspools in this neighborhood, so far as I can ascertain by inquiry. This is the explanation of the reports concerning the overflowing cesspools.”

I have instructed Mr. Burnley that he must make other than the present arrangements for the handling of his milk and have suggested that the local authorities close his spring house pending further investigations by that body. It is not likely that the milkmen at Burnley's are carriers as they have acted in that capacity for many years without being under suspicion.

The Lansdowne Board of Health has stopped the sale of Mr. Burnley's milk, there being three cases of typhoid fever in that borough. He now sells his milk in bulk to a pasteurizing firm in Philadelphia, but has conformed to the regulations imposed, pending further investigations.

On November 4th I made a final report of this outbreak, the substance of which is as follows:

"With the data we have collected we feel we are justified in regarding Mr. Burnley's milk supply as being the source of transmission and the sale of his milk has been stopped both in Lansdowne Borough and in Upper Darby Township. The date of the last case of which we have knowledge was September 21st, and in view of these facts, we feel that the epidemic is under control so far as the original source of infection is concerned.

Mr. Burnley has been given permission to renew the sale of his milk under conditions which we think will safeguard the consumers, namely, that his milk must be cooled at the spring house which he has erected at a new spring called the "lower spring," and that his cans must be washed and scalded at the farm house; that under no conditions is he to use the old spring or house until the water analyses establish the fact that the water is free from pollution, and that his cattle must be kept from the field in which the ice pond and the run are situated until the questions of pollution are finally determined and the necessary action taken; that he must sell his milk in bulk unless he will install a sterilizer by which his bottles can be made sterile. He proposes to clean the ice pond and admit water to it through pipes to come only from his new spring house. The spring house above the road is to be cleaned and the sewage from the village will be prevented from entering the run at points above. The old spring house at the present time is unoccupied, but as it is a large house it will doubtless soon be occupied by tenants. It, therefore, remains not only a source of danger to the individual tenant but also to the dairy farms along the course of this streams.

REPORT OF AN INVESTIGATION OF THE PREVALENCE OF DIPHThERIA IN THE GLEN MILLS SCHOOLS.

In accordance with your instructions I proceeded, accompanied by Dr. J. William Wood, Deputy County Medical Inspector, to Glen Mills, Thornbury Township, Delaware County, on November 20th, in order to investigate the continued occurrence of diphtheria in the boys' department of "The Glen Mills Schools." Previous investigations between the dates of October 9th and November 15th had been made by Dr. Wood, and, at his suggestion, the County Medical Inspector, Dr. H. M. Hiller, had requested that additional investigations be made.

The boys' department is a training school for the care of boys between six and sixteen years of age who may be committed by the Juvenile Division of the Quarter Sessions Court from districts in the eastern part of the Commonwealth of Pennsylvania. At present there are seven hundred and twenty-five boys on the enrollment, the average age being fourteen years. The administration is based upon a military system, adapted to the purposes of a specialized training.

To this end the distribution for housing and instruction is conducted on the family plan, each family having an average membership of from forty to sixty boys. The families numbered from one to fourteen are domiciled in twin cottages; those numbered fifteen and seventeen are housed in separate cottages. The general domestic and social conduct of each family is separate and distinct, even play grounds for each family being provided.

The common points of *contact* by means of which disease may have been transmitted in this instance were in the school rooms, during assembly for "detail" and, to a less extent, in work. Transmission by means other than contact was limited to the milk supply, which was common to all of the cottages, and to the misuse of water spigots in the school building.

The attendance at schools is by grades and hours, school being constantly in session from 7:30 to 11:15 A. M. and from 1:15 to 5 P. M. In the basement of the school an assembly is held three times each day for assignment to "detail." At this time there is an opportunity for contact of a more intimate nature and the distribution of infection could be accounted for in part by such gatherings. "Detail" takes about ten minutes, the boys being in family formation. As family assignments are not based on age, the school detail for each room includes boys from more than one family; in like fashion the details for shop, house, or farm service include boys from each family.

The contact in the shop and farm service was probably a negligible factor in transmission except in relation to dairy work. The house service gave opportunity for transmission both by contact and by food as a medium.

Attendance at chapel is daily and by families. Very little contact could occur during this period.

In the school building, the common drinking cups at the various spigots had been lost and a boy obtained water only by putting his lips over the spigot at the time of drinking. This has been a constant practice for an indefinite period.

An important factor was the occurrence of undiagnosed diphtheria. A record of all cases of inflammatory disease of the nose and throat under observation from October 1st to the date of investigation was studied. The dates of onsets of cases diagnosed as pharyngitis or tonsillitis and of those diagnosed as diphtheria are noted in the following table:

TABLE I.—DATES OF ONSETS.

		Tonsil- litis.	Diph- theria.	Total.	
October	1,		1	1	
	2,	1		1	
	3,		1	1	
	5,		1	1	
	7,	1		1	
	8,	4		4	
	11,	1		1	Onset of milk boy.
	13,	2	1	3	
	16,		1	1	Cook, house No. 3.
	18,	1		1	
	20,	1		1	
	23,	1		1	
	24,		2	2	
	25,	1	1	2	Gymnasium instructor.
	26,		1	1	
	27,	2		2	
	28,	2	1	3	
29,	2		2		
30,	4		4		
31,	2		2		
November	1,	4	1	5	
	3,	4		4	Bakeshop, house No. 12.
	4,	1		1	
	5,	2		2	
	8,	2		2	
	9,	1	2	3	
	10,	1		1	
	11,	1	1	2	
	12,	1	1	2	
	13,	4		4	
	14,	1	1	2	
15,		1	1		
16,	1		1		
		46	17	63	

In addition to a hospital, a "sick call" service is maintained under the direction of the Resident Physician, Dr. I. P. P. Hollingsworth, with the assistance of two nurses. A portion of the work is performed by the head nurse at a fixed hour each day. The minor treatment necessary for the average case is administered by her, the diagnosis

and treatment of special cases coming to the attention of the Resident Physician. So it occurred that the many cases of "sore throat" in the dispensary records were not studied by this officer.

Most of the cases placed under quarantine were mild and recovered promptly after receiving relatively small doses of antitoxin. All cases in isolation on the date of my investigation were convalescent. There had been but one death, a fatality of 5.9 per cent. This alone would seem to indicate the degree of virulence and one would expect many minor cases of nasopharyngeal inflammation without distinctive characteristics.

After carefully reviewing all the features of this occurrence of diphtheria, it seemed justifiable to assume that many of the cases diagnosed as "sore throat," tonsillitis, pharyngitis, and "cold" were in reality mild expressions of an infection by *B. diphtheriae*. No attempt is made in the table forming a portion of this report to exclude cases which were probably not diphtheria.

It is noted that the first case of diphtheria was reported on October 1st. The record of cases of "sore throat" prior to that time had not been noted although the school was in continuous session. Between September 21st and October 1st, there had been eighteen admissions from many points in the eastern district of Pennsylvania. It did not seem practicable at the time of the investigation to attempt the diagnosis of carriers who had arrived prior to the onset of the first case.

Milk. Owing to the peculiarities of daily contact, a factor leading to general dissemination did not occur until after the onset of October 11th of a boy whose daily work was in the dairy. Within ten to twelve days after the onset of his illness came the onsets of the larger group.

This patient, reported in the Dispensary on October 11th as having a sore throat, was studied by Dr. Hollingsworth on October 30th among others on the dispensary list. A culture made on this date from a serious nasal discharge showed the presence of *B. diphtheriae*.

During the interval he had continued in his employment, milking cows each day. Then census data show that every person included in Table 1 had used milk, either as a beverage or on breakfast foods. The school maintains its own dairy farm.

School Contact. The distribution in relation to school attendance is indicated in the following:

Family.			Total.
1.	A. M. { T. 0 D. 0	P. M. { T. 1, D. 2	3
2.	A. M. { T. 0 D. 1	P. M. { T. 2, D. 0	3
3.	A. M. { T. ? D. 0	P. M. { T. 3, D. 0	5

TABLE II.—Continued.

4,	A. M. {T. 0 D. 2	P. M. {T. 2, D. 0	4
5,	A. M. {T. 0 D. 0	P. M. {T. 1, D. 0	1
6,	A. M. {T. 2 D. 2	P. M. {T. 2, D. 1	7
7,	A. M. {T. 2 D. 1	P. M. {T. 3, D. 1	6
8,	A. M. {T. 2- D. 0	P. M. {T. 3, D. 1	6
9,	A. M. {T. 0 D. 0	P. M. {T. 0, D. 0	1
10,	A. M. {T. 0 D. 1	P. M. {T. 4, D. 1	6
11,	A. M. {T. 2 D. 0	P. M. {T. 1, D. 1	4
12,	A. M. {T. 2 D. 0	P. M. {T. 3, D. 1	6
13,	A. M. {T. 0 D. 0	P. M. {T. 0, D. 0	0
14,	A. M. {T. 3 D. 0	P. M. {T. 3, D. 0	6
15,	A. M. {T. 1 D. 0	P. M. {T. 0, D. 1	2
17,	A. M. {T. 0 D. 1	P. M. {T. 1, D. 0	2
	24	33	62

Sixty-two of the sixty-three cases attended school.

Each boy attended school during either morning or afternoon only. The grades are arranged as in the Commonwealth's Public School System. It is apparent from the distribution as shown that contact in school was relatively unimportant.

Family Contact. The possible transmission within the family life is indicated in the morbidity noted in each cottage.

TABLE III.—CASES BY COTTAGES.

Family.	Tonsillitis.	Diphtheria.	Total.
1	5	1	6
2	3	0	3
3	2	2	4
4	1	1	2
5	5	1	6
6	8	1	9
7	4	1	5
8	6	4	10
9	2	1	3
10	1	1	2
11	1	1	2
12	3	1	4
13	3	0	3
14	0	0	0
15	1	1	2
17	1	1	2
	46	17	63

It is possible that a few secondary cases were infected by such contact. Its importance is negatived by a study of the onsets in relation to each family's morbidity.

TABLE IV—DISTRIBUTION BY ONSETS AND FAMILY GROUPS.

Onsets.		Tonsillitis.	Diphtheria.	Onsets.		Tonsillitis.	Diphtheria.
		By Family Number.				By Family Number.	
October	1,.....	.....	4	November	1(2),.....	.....	17
	2,.....	..... 12	.....		2,.....	6, 9, 12, 17	.....
	3,.....	.....	8		4,.....	..... 12	.....
	5,.....	.....	10		8,.....	..... 8, 13	.....
	7,.....	.....	10		9,.....	..... 7	..... 5
	8,.....	3, 6(2),	8		10,.....	..... 13	.....
	11,.....	..... 6	.....		11,.....	..... 11	..... 11
	13,.....	..... 6	8		12,.....	..... 5	.....
	16,.....	..... 3	.....		13,.....	1(2), 5(2)	.....
	20,.....	..... 7	.....		14,.....	..... 5	..... 9
	23,.....	..... 9	.....		15,.....	.....	..... 3
	24,.....	.....	8		16,.....	..... 6	.....
	25,.....	..... 8	7				

It is possible that all cases in Family 7 resulted from the case reported as tonsillitis on October 20th, that all in Family 8 resulted from the case reported as diphtheria on October 3rd and in the other families the sequence may have been similar. But the character of the curve of onsets, when the total number is charted, indicates an epidemiological factor more general in its relation and a shorter time period when contrasted with inter-family means of transmission.

Conclusions: The outbreak came in all probability as the result of contact from an as yet undiscovered case with a mild infection or a carrier; the first group of thirteen cases occurred between October 1st and 13th inclusive; of these, one was a dairy boy, onset October 11th, who disseminated the virus by means of milk to a larger group, the members of which had onsets between October 23rd and November 16th inclusive. No doubt direct contact was responsible for a few cases and, at least, two subsidiary factors played a smaller part; two of these were the illness of a cook (diagnosis, diphtheria) in Family 3, onset October 16th; and the gymnasium instructor (diagnosis, diphtheria) undiagnosed and untreated for three days, onset October 25th.

Discussion: The occurrence of outbreaks of communicable disease in this and similar institutions is altogether preventable. It has not been proven in this instance that diphtheria was introduced by means of a boy committed while ill, but the exclusion of all other avenues open to investigation would strongly indicate such introduction.

Isolation of new arrivals during a period of incubation for the various communicable diseases has not been practised; a laboratory for the Resident Physician has not been provided; the hospital consists of a portion of one building, housing Families 13 and 14,

with convertible rooms on the other floor for isolation of existing cases of communicable disease. Isolation of contacts with new cases has not been provided for.

Fortunately, appropriations for the construction and equipment of a separate hospital building were made and the building is now nearing completion. Adequate laboratory equipment and provisions for the isolation of new arrivals are included.

The school house spigots were inverted, converting them into bubbling fountains; disinfection was carried out in detail; the Resident Physician inspected every boy and took cultures from all with a suspicious history or any discharge.

Dr. F. H. Nibecker, Superintendent, and Dr. I. P. P. Hollingsworth, Resident Physician, expressed their appreciation and in every way cooperated toward eliminating the sources of infection.

REPORT OF AN INVESTIGATION OF THE CONTINUED PREVALENCE OF DIPHTHERIA IN ALLENTOWN.

In accordance with your instructions I have made a reinvestigation relative to the continued prevalence of diphtheria in the city of Allentown, Lehigh County. This work was begun on November 24, 1914.

The city of Allentown adopted the Commission form of government during 1913, the new government¹ becoming operative on January 1, 1914. The personnel of the executive staff in the Bureau of Health, Department of Public Safety, remains, however, the same as under the Board of Health during the investigation of November, 1912.

The reasons for a new investigation on this occasion were the same as in 1912. The record of cases, from January, 1909 to the date of investigation, based upon the *dates of reports* to the Allentown authorities, is as follows:

TABLE I.

	1909.	1910.	1911.	1912.	1913.	1914.	Total.
January,	32	20	11	14	25	42	144
February,	34	7	15	11	32	29	128
March,	8	11	26	12	9	12	78
April,	13	13	8	25	17	8	83
May,	9	17	12	13	7	8	66
June,	7	7	19	18	17	12	80
July,	7	6	9	10	13	17	62
August,	11	8	13	12	18	15	77
September,	21	4	14	30	2	29	120
October,	25	25	24	81	34	30	219
November,	25	13	17	60	45	*63	223
December,	20	14	29	29	49	..	....
Total,	211	145	197	315	238	265	

*To November 24.

The 265 cases reported between January 1st and November 24th, 1914, inclusive, were studied in relation to general methods of transmission. It is, of course, obvious that finer details in which a temporary, accidental factor was responsible could not be studied since a census of particular relations was not to be obtained. The broader picture would seem, however, to be of more value, since the disease has been continuously prevalent for at least six years.

It appears in Table I that the highest morbidity occurred during the months of October and November although it continued at a relatively high rate during December, January and February. A general reduction occurred during March with no noteworthy increases until September. This conforms to the State Statistics on diphtheria morbidity.

The age and sex of the 1914 cases follow:

TABLE II.

Age.	Male.		Female.		Total.	
0-5,	48	48	52	52	100	100
6,	18	....	21	....	39	....
7,	8	....	7	....	15	....
8,	6	44	9	52	15	96
9,	8	....	3	....	11	....
10,	4	....	12	....	16	....
11,	3	....	1	....	4	....
12,	1	9	5	10	6	19
13,	3	....	1	....	4	....
14,	2	....	3	....	5	....
15-19,	2	....	8	....	10	....
20-24,	2	....	13	....	15	....
25-29,	4	12	7	38	11	50
30-34,	1	....	7	....	8	....
35-39,	1	....	0	....	1	....
40-45,	2	....	3	....	5	....
			113	152	265	

In contrast with urban morbidity rates at various age periods for the entire State, several suggestive variations may be noted; first, the proportion of the number under school age to the number in school attendance is increased and suggests that school was relatively a less important factor in transmission; second, the unusually high morbidity of adults suggests the importance of home transmission. This is emphasized by the increased ratio of females to males, over three-fourths of all cases *over school age* being females. Of the total, 149 or fifty-six per cent. were in domestic relation as contrasted with school and the few other relations.

The occupations of all cases confirm these findings:

TABLE III.—CASES BY OCCUPATION.

	July-August Groups.	September-June Groups.	Total.
Under six years,	13	87	100
Housewife,	4	17	21
School,	13	105	118
Silk mill,	0	8	8
Various,	3	15	18
			265

School attendance is required from the first week of September to June 25th.

The distribution of cases by wards and months of occurrence, as corrected, shows how general the distribution was throughout the city.

TABLE IV—DISTRIBUTION OF CASES BY WARDS AND MONTHS.

Ward.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	Total.
1,	0	0	5	1	1	3	2	0	9	3	6	30
2,	2	2	1	1	1	1	1	1	2	2	1	11
3,	7	1	0	0	0	0	0	0	2	2	1	23
4,	0	0	0	0	0	0	0	0	0	4	0	4
5,	1	0	0	0	0	0	3	0	0	0	2	6
6,	5	4	1	0	0	0	0	1	2	2	1	18
7,	1	1	0	0	0	0	0	0	1	2	1	13
8,	1	4	1	0	1	0	1	2	3	7	18	40
9,	0	0	1	1	0	0	0	7	1	1	1	12
10,	10	5	2	0	3	2	3	3	1	6	1	36
11,	9	0	1	1	0	2	0	0	0	3	0	13
12,	4	2	1	0	0	2	0	0	1	1	15	26
13,	1	1	1	0	0	0	0	0	0	0	2	5
14,	4	4	0	0	0	0	0	0	3	4	1	16
	45	24	14	5	9	11	17	15	26	36	63	265

Examination of the table shows that exceptionally large numbers in any one month occurred but three times, viz: January in the Tenth Ward, 10 cases; November in the Eighth Ward, 18 cases; November in the Twelfth Ward, 15 cases.

The factors operative in these three excesses were probably domestic in the Tenth Ward and school in the Eighth and Twelfth Wards. This is suggested in the following table which outlines the distribution by wards, school, and time of actual occurrence, showing, in addition, the relation of school cases to enrollment.

TABLE V.—DISTRIBUTION OF CASES BY WARDS, SCHOOLS AND MONTHS.

Ward.	School.	Total enrollment.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	Total school cases.	School cases by wards.	City cases by wards.	
1	Harrison,	4287	.....	.....	1	.....	1	.....	.....	.....	2	1	.....	2	12	50
	Morton,	4253	.....	.....	.....	.....	1	.....	.....	.....	2	1	.....	2	.....	.....
2	Garber,	155	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
	Horn,	231	12	1	1	1	5	6	11
3	Livingstone, ..	429	.....	.....	.....	.....	.....	1	.....	1	12	12	1	5	5	23
4	Wolf,	500	1	.....	.....	1	.....	.....	.....	1	.....	1	1	5	5	7
5	Hunsicker,	307	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	8
6	Sheridan,	528	2	1	.....	.....	1	.....	.....	.....	.....	.....	.....	4	4	19
7	McKinley,	504	.....	1	1	.....	.....	.....	.....	.....	.....	.....	2	4	4	13
	Cleveland,	395	.....	.....	.....	.....	.....	.....	2	1	.....	.....	3	6	.....	.....
8	Washington, ...	575	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	12	12	40
	Jackson,	377	.....	.....	.....	.....	.....	.....	.....	.....	1	3	4	.....	.....	.....
9	Herbst,	205	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	3	3	12
	Stevenson,	536	2	1	.....	.....	2	.....	1	.....	.....	3	.....	9	.....	.....
10	Allen,	188	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
	Garfield,	376	3	.....	.....	.....	.....	1	.....	.....	.....	.....	1	5	16	36
11	Franklin,	555	4	2	.....	1	.....	2	2	.....	.....	1	.....	12	12	18
12	Jefferson,	412	1	2	.....	.....	.....	.....	.....	1	.....	.....	12	16	16	26
13	Lincoln,	334	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2	5
14	Mosser,	463	3	2	.....	.....	.....	.....	.....	3	3	.....	.....	11	11	16
	High,	730	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	3	.....	.....
	Parochial, .....	.....	1	.....	.....	.....	.....	.....	1	.....	1	2	.....	5	.....	.....
			25	12	3	2	4	4	5	5	12	15	30	117	109	265	

With the exception of the Jefferson School Group during November, the distribution of the school cases is so general that school children were obviously infected for the most-part in relations other than contact in school.

The daily inspection service (outlined in the Report of 1912) has been increased in efficiency through the interest and activity of the Board of School Directors and the School Medical Inspectors, Drs. Thomas A. Weaver and Frank Boyer. As the result of careful investigation of the promptness in excluding cases and contacts and the active administrative measures, it is possible to state that factors other than school contact must have been responsible for the unusual prevalence of diphtheria.

The distribution of cases in relation to Sunday School and Church attendance could not be obtained except by special census.

A census of all cases was collected by the Sanitary Inspectors at the time of placarding. From this the source of milk supply was compiled and tabulated.

Milk from seventy-one separate sources,	239 cases
Milk from unstated sources,	18 cases
Milk condensed,	8 cases
	265 cases

The largest number of cases on any route was twenty-eight of which twenty-four occurred during the following months:

August,	4 cases
September,	4 cases
October,	10 cases
November,	6 cases
	24 cases

The dealer in question is one having the largest number of patrons; the cases on his route were, for the most part, in two wards but the distribution did not conform to careless methods in delivery.

A study of the distribution of diphtheria in relation to the density of population was based on the area and population of each ward, recent increases being worked out on data furnished by the City Engineer, Charles D. Weirbach. The ward density is contrasted with the cases reported in each ward (using the average city density as one hundred) and expressing numerically the relation between the various ward densities. The average city density of one hundred and the average number of cases in each ward of twenty show an average relation of one to five.

TABLE VI.

Ward	Population	Ward Density	No. of Cases.
1,	4,125	58	30
2,	3,622	138	11
3,	3,396	116	23
4,	2,531	183	7
5,	2,150	174	8
6,	5,077	89	19
7,	3,566	166	13
8,	7,168	69	40
9,	4,260	173	12
10,	7,290	132	36
11,	4,997	31	18
12,	1,874	14	27
13,	1,857	35	5
14,	2,500	16	16

It is readily observed that a consistent ratio between the ward density, ward population, and morbidity does not exist. In other words, crowding was not a factor appreciably contributing to the continued prevalence of the disease.

In the local administration certain features essential to control in a large city were not operative. Reporting by local physicians was

considered to be as prompt as possible. The reports of many cases were delayed because physicians were called in consultation at varying dates after the onset.

Tonsillitis, "sore throat," and many other inflammatory lesions of the upper respiratory tract were considered to be very common, and it is the belief of the City Health Officer and of other physicians consulted that cases of diphtheria without distinct membrane are not reported.

The Bureau of Health does not study contacts nor does it keep them under observation, and it is not customary to inspect contacts in quarantined premises prior to release. Notice is given to the public and parochial schools and to libraries of all reported cases, but not to superintendents of Sunday Schools.

Prior to November 1, 1914, the physicians were without a free laboratory service, and but few cases were studied bacteriologically. Modified quarantine was always established and disinfection at the end of twenty-one days was performed by one of the methods of using solidified formaldehyde. At the time of placarding, a circular of "Information for Quarantined Families" was handed to the family.

It is believed that the rules were not observed but no investigations were made except in those instances in which sufficiently credible evidence was first offered. Schools were closed long enough for the purpose of disinfection but not long enough to cover incubation of the disease in contacts. The exclusion of the latter was carried out to a limited extent through School Medical Inspection service.

It is apparent that the usual channels of transmission were not responsible for the prevalence of disease in Allentown but that weakness of administration contributed to a certain extent; the direct results were violations of quarantine regulations. Transmission from persons with undiagnosed mild infection probably played an important but secondary part. The findings detailed in the report of 1912 were operative in November, 1914.

The following suggestions were made to the Secretary, City Health Officer, and Sanitary Inspectors:

That notices for exclusion be sent to Sunday School authorities.

That inspection of all contacts in quarantined premises be made prior to release.

That the morbidity from mild inflammatory lesions of the upper respiratory tract be noted by conference with physicians.

That a circular letter be issued to physicians relative to the prevalence of undiagnosed mild cases.

That the laboratory service be extended as rapidly as possible. At the time of investigation only a few cultures from the private practice

of a few physicians had been studied. The advertisement of the laboratory and its use for the Bureau of Health administration was necessary.

That, in the event of any violation of the provisions of *modified* quarantine, its privileges should be withdrawn and *absolute* quarantine be enforced.

REPORT OF AN INVESTIGATION REGARDING THE PREVALENCE OF SCARLET FEVER IN DONORA.

Pursuant to your instructions I proceeded to Donora, Washington County, on October 23rd in order to comply with a request for an investigation as to the causes underlying the continuance of scarlet fever in that borough.

Donora is one of the more rapidly growing mill towns of the Monongahela Valley district, the population in 1910 being 8,174; it probably exceeds 10,000 at the present time. There is no basis for a comparison in estimating the present population as the borough was organized subsequent to 1900. Approximately four-fifths of the population are foreign-born or the immediate offspring of foreign-born parents.

The cases studied were those which have occurred since January 1, 1914, and constitute two groups. The first group of six cases, occurring between January 1st and January 20th, was quickly eliminated by the prompt action of the local Board of Health. The second group of a hundred and seventy-four cases began with a case reported on April 20th, the date of onset being April 18th. The origin of this case remains in doubt, but the clinical history of many cases and the findings subsequent to the inspection here reported seem to indicate that the disease had been prevalent in a mild form during the months from April to the date of my investigation.

The dates of onsets are important as showing the constant occurrence of new cases despite the active measures taken by the local Board of Health.

AGES OF ALL CASES BY MONTHS OF OCCURRENCE.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Total.
0-5	4	0	0	3	12	30	11	7	9	13	92
6-10	1	0	0	0	9	19	20	3	5	10	67
11-14	0	0	0	0	4	5	3	1	0	2	15
15-19	0	0	0	0	1	1	2	0	0	0	4
20-24	1	0	0	0	0	0	0	0	0	1	2
—	—	—	—	—	—	—	—	—	—	—	—
	6	0	0	3	26	55	39	11	14	26	180

Two factors of importance are noted in the above tables: first, the predominant age affected was under six years, and second, the highest morbidity was during the summer months.

The age and sex of all cases were as follows:

AGE AND SEX.

	Male.	Female.	Total.
0-5	38	54	92
6-10	35	32	67
11-14	7	8	15
15-19	2	2	4
20-24	1	1	2
—	—	—	—
	83	97	180

As already noted, fifty-one per cent. were under six years of age.

No other noteworthy feature is indicated except the slight excess morbidity of females, which, in connection with other factors, led to the formation of an epidemiological opinion.

Because of the time of occurrence, and to a less extent, the predominant age in relation to the morbidity, the usual avenues of transmission were apparently not largely responsible.

Direct contact only was considered the method by means of which the prevalence was broadly to be studied. For this reason inanimate objects such as food stuffs and fomites, though included in the investigation, are not detailed in this report. Indeed, except in a few isolated instances, no method except direct contact could be discovered.

The usual probable avenue in school and particularly during cold weather was notably absent. The schools were closed about May 15th; the greatest number of cases for that month were reported after that date. They were reopened the first of September.

It is evident that the majority of the cases occurred during a period when schools were closed. The distribution of those attending the Allen School after the reopening of schools was studied and will be mentioned later.

*To October 23rd inclusive.

There are four school buildings known respectively as the First Street (in which is located the superintendent's office), the Allen, the Fifth Street, and the Van Castner Schools.

A local census shows 2,507 school children in the borough between six and sixteen years while the average attendance at the public schools is two thousand and in the Parochial Schools about three hundred; the latter are St. Joseph's (Polish) and St. Charles Parochial Schools. Seventy per cent. of the children in both public and parochial schools are the offspring of foreign born parents.

In conference with Mr. Edgar E. Reed, Superintendent of Public Schools he stated that he received all reports from the Health Officer and notified teachers by posting a notice on the bulletin board of the school. The Health Officer's notification was both by telephone and in writing.

Medical inspection of schools has never been adopted by the borough nor does the school board employ a physician for inspection purposes.

After receiving the Health Officer's notification, the particular school is dismissed, the room is disinfected by the borough Health Officer, and is usually reopened on the first school day following the disappearance of the gas.

The patient is not permitted to return to school until a written release is received from the Health Officer for both patient and contacts in the same family at the end of the quarantine period.

Contacts in school are not determined, hence isolation during possible incubation periods is not practised.

Pencils are individual but are collected at night in a special rack in which they are more or less in contact. All of the material used in the kindergarten work and in the primary grade is common to all the children in the grade. Individual seats are in use in every school.

During the week of my investigation, there were twenty-four absent from school, of which seventeen suffered with severe attacks of acute tonsillo-pharyngitis. Skin lesions were not found. As some of these occurred in families previously quarantined because of scarlet fever, it seems to be indicated that mild, undiagnosed scarlet fever was unusually prevalent.

Studies of the cases occurring in the Allen School, after the re-opening of the public schools, showed that while two cases had been in attendance at school after the development of scarlet fever, they could not, according to the dates of onsets of the cases, have been responsible for the infection of the entire group. No discoverable responsibility for the group attending the Allen School at this time could be found, which fact seems to emphasize the point made in the previous paragraph relative to mild, undiagnosed cases.

Notifications are not issued to Sunday School authorities. There are twelve religious organizations in the borough but the distribution of cases in these was not studied. A census for this purpose would have required many days. Changes of residence are frequent; differences of language would have required an interpreter. That Sunday Schools played some part in transmission is probable, but in this epidemic the chief factor would not have been entirely controlled even had Sunday School supervision been carried out.

Data relative to motion picture shows and other places for public assembly supplied even less evidence of transmission by promiscuous contact.

Of all inanimate methods of transmission, milk would seem the most likely. The distribution of cases was not parallel with the route of any one distributor.

Mortality. Among the hundred and eighty cases studied, there were twenty-seven deaths, a mortality of fifteen per cent. This is a relatively high mortality when contrasted with that of other epidemics. Accordingly to reports, the mortality varies from four per cent. to fifteen per cent. with an average of 8.1 per cent.

In the age group under six years, there were twenty-two deaths, a mortality of twenty-four per cent. This is well below the highest mortality recorded in previous epidemics for that particular age group. Of the eighty-two cases between six and fourteen years, the mortality was six per cent.

It is interesting to note but remains unaccounted for that the mortality of males was twenty-four per cent. and that of females only seven per cent. It is probable that the reasons were in part sociological. Fifty-four per cent. of the patients were females. Studies of population showed for the total age group a slight excess of females. In the opinion of local physicians there was no difference in degree of physical resistance between males and females. The fact remains that the mortality of males greatly exceeded that of females, while the morbidity among females slightly exceeded that among males.

The unusually low mortality in those over six years of age emphasizes the idea that mild cases were largely responsible and as those of the older ages have a wider range of contact, it would seem that the prevalence of such mild and atypical cases accounted for the long continued morbidity. Parallel studies of the morbidity from measles, chicken pox, mumps, whooping cough, and diphtheria were made during the same investigation. These studies confirm the opinion that the usual methods of administration were enforced. Absolute quarantine with guards had been in use since July; the cost of this service had approximated \$2,000.00. It was apparent that the efforts of the Board of Health had been constant in relation

to all usually practical methods. However, a medical inspector to study contacts at the time of report and before release from quarantine was not employed.

In a special meeting of the Board of Health these evidences were presented; the Health Officer was advised to continue *absolute* quarantine until the present cases had been released. It was pointed out that the services of an expert medical inspector would cost far less and that the sickness prevented and the lives saved would more than remunerate the borough for the expense of such service. It is to be greatly regretted that medical inspection of schools has not been adopted by the school authorities.

The plans outlined by your representative were adopted, a medical inspector was employed by the Board of Health, all cases of acute inflammation of the nasopharynx were temporarily isolated, and less important points in administration were more closely supervised. During the week following November 2nd, not one case of scarlet fever was discovered and reported.

REPORT OF AN INVESTIGATION REGARDING AN EPIDEMIC OF DYSENTERY IN FREELAND AND VICINITY.*

In accordance with your instructions I proceeded to Freeland, Luzerne County, on August 30, 1914, in order to investigate the prevalence of a diarrhoeal disease which had been reported to you by residents of that borough. I was associated in this work with Samuel R. Parke, Jr., Assistant Engineer. The work of inspection and census taking was performed by Sanitary Inspectors Simon B. Engle, Morris Z. Frederick, Frank H. Lanard, and E. L. Hill. Peter Lutz, of Freeland was employed as interpreter. Advice and material assistance were given by the officers and members of the Board of Health and the local registrar for the State Department of Health, John B. Hanlon. The Board consisted of William McCarron, President, H. W. Fackler, Secretary, Dr. Roy Truckenmiller, S. S. Hess, D. D. S., Joseph G. Sarracks, and Rowland Jones, Health Officer.

Freeland borough is located six miles northeast of Hazleton, with which it is connected by an electric railroad, and is also on a branch of the Lehigh Valley Railroad. The population by the census of 1910 was 6,197 and has probably not changed materially during the last four years. Freeland is one of the old established mining towns of the anthracite coal region, the variation in population being one of

*This account is supplemented by Section 20 of the report of the Division of Sanitary Engineering.

TABLE II.—Continued.

	Upper Lehigh.	Sandy Run.	Freeland.	Highland.	Drifton.	Eckley.	Jeddo.	Pink Ash.	Japan.	Swamptown.	Middletown.	Harleigh.	Butler Township.	Foster Township.	Beaver Meadow.	Total.
	16	—	19	—	—	—	—	—	—	—	—	—	—	—	—	19
	17	—	15	—	1	—	—	—	—	—	—	—	—	—	—	17
	18	—	11	—	—	—	—	—	—	—	—	—	—	—	—	12
	19	—	12	—	—	—	—	—	—	—	—	—	—	—	—	12
	20	—	18	—	1	—	—	1	—	—	—	—	—	—	—	22
	21	—	19	—	1	—	—	—	—	—	—	—	—	—	—	21
	22	1	12	—	2	—	—	—	1	—	—	—	—	—	—	18
	23	1	29	—	7	—	—	—	1	—	—	—	—	—	—	39
	24	1	24	—	1	1	—	—	2	—	—	1	—	—	—	32
	25	1	26	—	2	1	—	—	1	—	—	—	—	—	—	35
	26	—	32	—	2	—	—	—	—	—	—	—	—	—	—	34
	27	1	36	—	—	—	—	—	—	—	1	—	—	—	—	39
	28	—	28	—	3	1	—	—	1	—	—	—	—	—	—	33
	29	—	33	—	1	2	—	—	—	—	—	—	—	—	—	38
	30	—	30	—	2	1	—	—	—	—	—	—	—	1	1	33
	31	1	54	—	1	—	—	—	—	—	—	—	—	—	—	56
September	1	2	23	—	3	—	—	—	—	—	—	—	—	—	—	28
	2	2	24	—	—	—	—	—	—	—	—	—	—	1	—	7
	3	—	16	—	—	—	—	—	—	—	—	—	—	—	—	16
	4	—	11	—	3	—	—	—	—	—	—	—	—	1	—	15
	5	—	10	—	2	—	—	—	—	—	—	—	—	—	—	12
	6	1	1	—	—	—	—	—	—	—	—	—	—	—	1	17
	7	1	12	—	14	—	—	—	—	—	—	—	—	—	—	29
	8	—	10	—	7	—	2	—	—	—	—	—	—	—	—	22
	9	1	10	—	7	—	1	—	1	—	—	—	—	—	—	22
	10	1	7	—	7	—	2	—	—	—	—	—	—	—	1	18
	11	2	5	—	1	2	—	—	—	1	—	—	—	—	—	12
	12	2	9	—	—	—	1	—	—	—	—	—	—	—	1	13
	13	—	6	—	4	—	1	—	2	—	—	—	—	—	—	14
	14	—	5	—	4	1	—	—	1	—	—	—	—	—	—	13
	15	1	5	—	4	—	—	—	2	—	—	—	—	—	—	12
	16	1	5	—	1	—	—	—	—	—	—	—	—	—	—	8
	17	—	7	—	3	1	—	—	—	—	—	1	—	—	—	12
	18	1	6	—	6	—	—	—	—	—	—	—	—	—	—	14
	19	2	3	—	4	—	—	—	1	—	—	—	—	—	1	10
	20	—	3	—	3	—	—	—	—	—	—	—	—	—	—	7
	21	—	4	—	4	—	—	—	—	—	—	—	—	—	1	9
	22	1	3	—	4	—	—	—	—	—	—	—	—	—	—	9
	23	3	2	—	4	—	—	—	1	—	—	—	—	—	—	11
	24	—	4	—	2	—	—	—	1	—	—	—	—	—	—	7
	25	—	2	—	2	—	—	—	1	—	—	—	—	—	—	5
	26	—	1	—	2	—	—	—	1	—	—	—	—	—	—	6
	27	—	—	—	2	—	1	—	—	—	—	—	—	—	2	4
	28	—	2	—	5	—	—	—	—	—	—	—	—	—	—	8
	29	—	2	—	1	—	—	—	—	—	—	—	—	—	—	3
	30	—	3	—	6	—	—	—	—	—	—	—	—	—	—	9
October	1	—	1	—	4	—	—	—	—	—	—	—	—	—	—	5
	2	—	3	—	1	—	—	—	—	—	—	—	—	—	—	4
	3	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
	4	—	2	—	—	—	—	—	—	—	—	—	—	—	—	2
Total,	28	12	709	2	136	9	11	1	18	4	1	3	1	8	17	*960

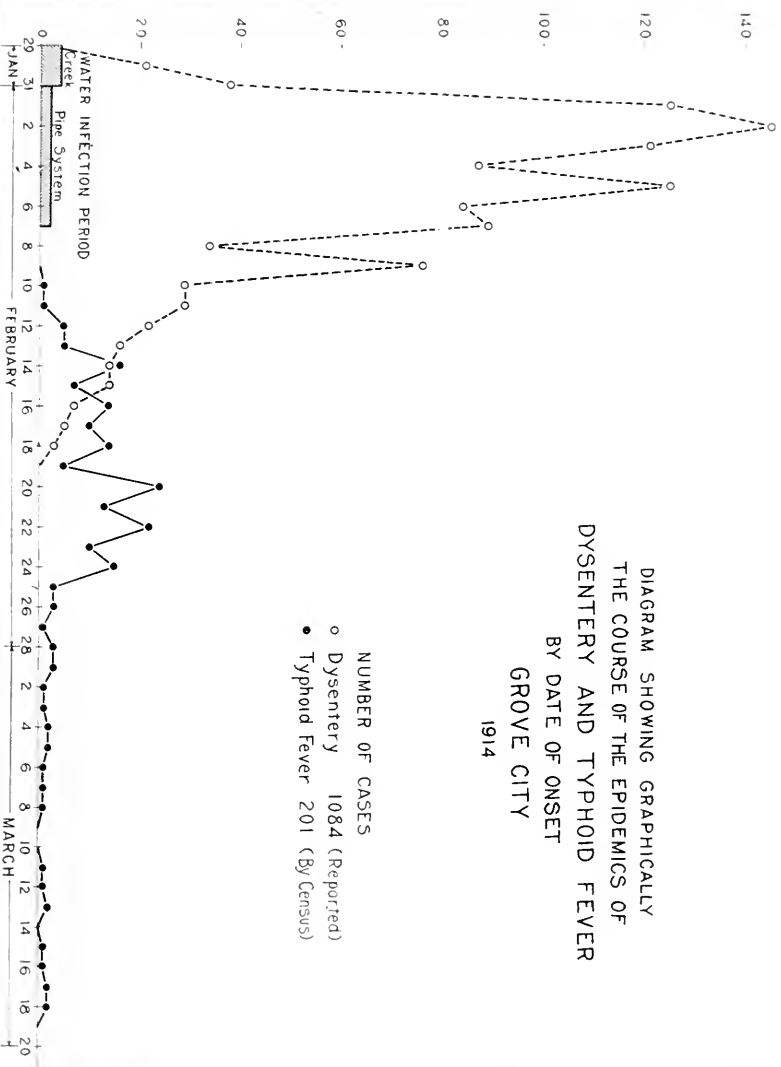
*Of the 965 cases, four had onsets prior to August 1st; one onset was questionable, but prior to that date.

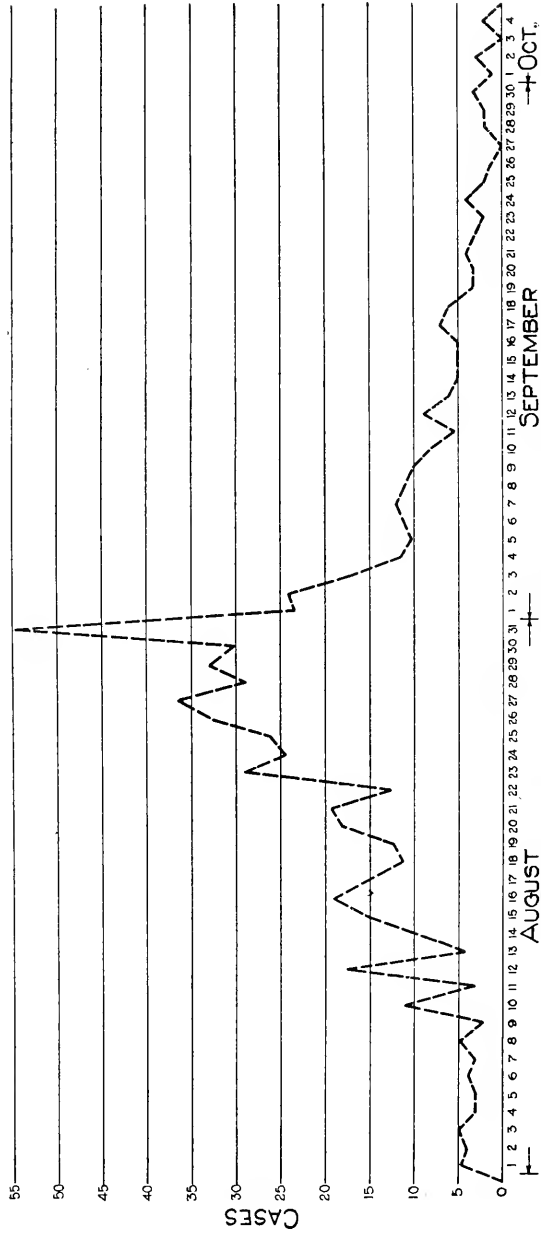
Two cases belonging to Freeland are included in these five.

That the primary focus was in Freeland seems to be demonstrated by the above table. Drifton, in which a hundred and thirty-six cases occurred, is immediately adjacent to the borough of Freeland. It is approximately one mile by public and electric road from the centre of Freeland to the centre of Drifton, but by cross lot pathways the business centre of Freeland is as accessible to residents of Drifton as it is to residents of the outlying districts of Freeland itself. Each

DIAGRAM SHOWING GRAPHICALLY
 THE COURSE OF THE EPIDEMICS OF
 DYSENTERY AND TYPHOID FEVER
 BY DATE OF ONSET
 GROVE CITY
 1914

NUMBER OF CASES
 ○ Dysentery 1084 (Reported)
 ● Typhoid Fever 201 (By Census)





FREELAND DYSENTERY CURVE
TOTAL NUMBER OF CASES

has its own separate water supply, but the religious, social, and business activities of the residents of Drifton are largely centred in Freeland.

It appears in Table II that with the exception of three, all cases reported during the first two weeks of August were located in Freeland, and that with the increasing prevalence of the disease in that borough cases were reported in outlying communities. These cases acting as local foci were followed in several of the villages (by means of direct household transmission) by local excesses. Because of its easily accessible location, Freeland during the summer season is the centre of a number of public entertainments, such as picnics, festivals, etc. These were largely attended by non-resident cases.

The clinical diagnosis was bacillary dysentery and the evidence on which this was based is found in the bacteriological findings and epidemiological data. The transmission of the cause of bacillary dysentery would be the same as in typhoid fever, cholera, or any other disease, the causative agent of which is found in excrement.

CLINICAL AND BACTERIOLOGICAL FINDINGS.

Clinically, the patients showed the phenomena of an acute ileocolitis in widely varying degrees of severity. Two or more cases in the same family presented different degrees of reaction, in one a mild diarrhoea, in another a severe membranous enterocolitis with hæmorrhage.

The onsets were sudden, ushered in with cramps, diarrhoea, and tenesmus; the stools, at first feculent, became seromucous in the majority and in a large proportion were hæmorrhagic. In many, shreds of the pseudomembrane were observed over periods of time varying from a few days to two weeks. After two to seven days the blood disappeared. In those in whom necrosis was evident the clinical course remotely simulated typhoid fever.

The febrile course was irregular; in very mild cases, no increase of temperature was noted. Enlargement of the spleen and liver was not seen in any case, although pain on deep respiration in the left upper abdominal quadrant was reported in a few cases. Roseola was observed in the more severe cases. Tympanites did not occur. Headache was relatively infrequent.

The most prominent complication was arthritis. This was multiple, painful, and usually diagnosed as "acute rheumatic fever." As the result of careful clinical studies, it is justifiable to state that these patients suffered with an acute infectious arthritis in which the etiological factor of the epidemic was the cause.

Complications of the cardiovascular and nervous system were not reported within a month following the subsidence of the epidemic; likewise involvement of the liver did not occur.

Reaction of blood sera with the following members of the typho-colon series was studied in the Department Laboratories under the direction of Doctor J. B. Rucker, Jr.:—*B. typhosus*, *B. paratyphosus A.*, *B. paratyphosus B.*, *B. paracoli*, *B. dysenteriae (Shiga)*, *B. enteritidis (Gaertner)*, *B. coli* (Laboratory stock culture), a *B. coli* form recovered in Erie during the epidemic of bacillary dysentery in 1911, and a *B. coli* form recovered from a case of bacillary dysentery during an epidemic in Bethlehem in 1912, which was similar in all characteristics to the form described by Poehls; in addition, the blood sera of eight cases were studied with two forms recovered from the feces of a typical, severe case of dysentery in Freeland and called for convenience *B. coli (Freeland)*.

The results of the agglutination tests were as follows:

Agglutination with <i>B. coli (Erie)</i> only*,	3 cases
Agglutination with <i>B. typhosus</i> & <i>B. coli (Erie)</i> ,	1 case
Agglutination with <i>B. typhosus</i> only*,	1 case
Agglutination with <i>B. coli (Freeland)</i> only,	6 cases
Agglutination with <i>B. coli (Freeland)</i> and <i>B. coli (Erie)</i> , ..	2 cases
Negative to all forms,	1 case
	14 cases

Studies of eight specimens of feces were made, seven with negative results, one being positive. The only organisms isolated from feces having characteristics which could possibly give rise to the belief that they were pathogenic were recovered from the feces of a lad of seven years suffering with hæmorrhagic membranous dysentery. Two atypical bacilli, designated J-101 and J-113 respectively, were recovered. The characteristics of these were as follows:

"J-101—Colon-like morphology. Gram negative, motile.

Colonies on agar-agar: grayish-white, translucent, circular, entire, elevated, slightly convex, homogenous, soft.

Agar slant: Colon-like growth whole length of streak, white, translucent.

Gelatin stab—Not liquefied.

Potato—Grayish-brown, good growth.

Litmus milk: Acid in twenty-four hours. In seventy-two hours, soft coagulum. In 120 hours reduction of litmus. No digestion of casein.

Acid and gas in Dextrose, Lactose, Maltose, Mannite, Inulin. No change in Saccharose or Raffinose.

"J-113—Motile, colon like in morphology and staining.

Colonies on agar-agar like *B. coli*.

Agar slant: Colon-like, grayish-white, translucent whole length of streak.

Gelatin stab: Not liquified.

Potato: Grayish-brown.

Litmus Milk: Acid in twenty-four hours. Firm coagulum in seventy-two hours. Later reduction of litmus occurred.

Acid and gas in Dextrose, Lactose, Saccharose, Maltose, Mannite, and Raffinose. No change in Inulin.

Indol is produced.

Agglutinates with serum of host, but not with serum of rabbits immunized with *B. typhosus*, *B. paratyphosus A.* or *B. enteritidis*.

"J-101 does not split Saccharose while J-113 does.

"There is also a difference in the splitting of inulin and raffinose. J-113 splits raffinose and does not split inulin."

It was further noted that both strains of bacilli agglutinated with the sera of other patients from Freeland, which in turn did not

*Not studied with *B. Coli (Freeland)*.

agglutinate with members of the typho-colon series. It is concluded that J-101 is a typical *B. coli* except for the soft coagulum produced in milk and in the splitting of inulin; J-113 is a *B. coli communior* type, atypical only in that it does not split raffinose.

Forms which could be classified under the dysentery group were not recovered. The only evidence that the two described forms may have been pathogenic is found in their biochemical and, to a somewhat greater extent, in the agglutinating reaction with sera from all of the Freeland patients with which they were studied.

Different strains of the colon bacillus are not identical in their agglutinogenic receptors. A serum which agglutinates one strain will not agglutinate all strains. According to Paltauf and others the reaction is largely individual and the serum of a patient with a colon infection will agglutinate the strain causing the disease (epidemic) but will probably not affect other strains. Hence, for diagnostic purposes the test must be performed with a strain recovered from a patient infected during the same epidemic.

The relation of strains belonging to the colon group with epidemics of enterocolitis has long been noted. This was first discussed by Escherich prior to the recovery and identification of the *B. dysenteriae*, but the view that an actual "colitis contagiosa" came from colon forms was sharpened rather than minimized. Pfaundler states in reference to enterocolitis (the colitis contagiosa of Escherich) that if other infections can be excluded and if the sera of patients give the agglutination reaction in dilutions of one to fifty with the bacillus which has been recovered from the feces, colon infection is indicated. This has been confirmed by Paltauf.

With these dicta the findings in Freeland apparently harmonize sufficiently to suggest that the microorganisms recovered from a case of membranous enterocolitis (contagiosa) were, at least, the principal etiological factors in this epidemic.

The eight specimens of feces were searched for amoebae with negative results. Three specimens of sediment from the reservoir were likewise examined with negative results. The specimens, particularly the feces, were carefully shipped with precautions relative to the necessary temperature. It was not to be expected that amoebae played a part in the etiology. Whether the amoeba stands in direct casual connection with acute dysentery is still a matter of investigation. At present the trend of opinion seems toward a view that it is a secondary factor and that it is not the primary agent, especially in the acute forms.

ADMINISTRATIVE DATA.

In the organized communities all preventive measures were carried out by the Boards of Health. In townships of the second class the Health Officer of the State Department was in charge. The disin-

fection of the entire system of water supply in Freeland was carried out by employees of the Freeland Water Company under the personal direction of Engineer Parke.

The most noteworthy difficulty was in securing the intelligent cooperation of householders. All principles of domestic hygiene were not merely disregarded but absolutely violated, even after carefully detailed instructions relative to the disease were given in appropriate languages. The continuance of the reporting of secondary cases was less, however, than had been forecasted by your representative to the local authorities. In order to overcome these difficulties the Board of Health in Freeland made unsuccessful efforts to secure authority to employ nurses for district service. The disease continued apparently until the material available to infect had been exhausted.

In Drifton, which is an unorganized community, the District Nurse Service, maintained as one of the private philanthropies of Mrs. Eckley B. Coxe, became an important factor in the prevention of secondary cases. Two nurses assigned to this service by Mrs. Coxe rendered commendable and unusual service with the result that the proportional morbidity in Drifton was far below that noted in other communities. The details relative to the services of Health Officer James Collins in securing the cooperation of the various Railroad and Coal Company interests are filed in the archives of the Department. It is probable that as a result of the campaign carried on through these agencies, the insanitary conditions chronically prevalent in and about the homes of these people reached a stage of reduction which has never heretofore been attained.

EPIDEMIOLOGICAL DATA.

The results of epidemiological studies were negative so far as every possible agent was concerned except water. The data follow:

Milk:—The largest portion of the milk and cream supplied to the residents of Freeland came from dairy farms located in Butler and Foster Townships, Luzerne County. There were eight vendors in Freeland. Six were dairy farmers residing in Butler Township, who vended their own and additional purchased supplies; and two resided in Freeland purchasing their supplies from farmers in Foster Township exclusively.

The eight vendors of milk and all their sources of supply were thoroughly inspected. The sanitary conditions and the medical history of the various dairies were investigated with a view to acquiring all possible information concerning the cows and the households which could have any relation to the epidemic. The examination included not only the establishments and dairies of such of the vendors as were themselves producers but also some thirty-five other

producers from which milk came to them. The result of the inspection indicated that none of this milk could have played a part in causing or prolonging the outbreak.

In common with the custom prevailing in communities of this character, some residents maintain cows on their premises and to a small extent sell milk to neighbors. The use of milk by patients was as follows:

TABLE III.—USE OF MILK. (Freeland).

Dealer No. 1,	82 cases
Dealer No. 2,	62 cases
Dealer No. 3,	16 cases
Dealer No. 4,	21 cases
Dealer No. 5,	26 cases
Dealer No. 6,	53 cases
Dealer No. 7,	32 cases
Dealer No. 8,	2 cases
Combinations of above,	13 cases
Goat milk only,	2 cases
Own cow only,	85 cases
45 residents selling to neighbors,	158 cases
Condensed and evaporated only,	165 cases
Various,	10 cases
Unknown,	17 cases
None used,	27 cases
Total,	*711 cases

Three hundred and seven cases, or 43.2 per cent. used milk produced in places remote from the borough.

These were supplied by the eight vendors, each having different sources of supply, the maximum number of cases on any one vendor's route being eighty-two. There is reason to believe that very little trading was practised between vendors; local purchases were emphatically denied by each one. Two hundred and forty-five, or 34.4 per cent., used milk produced on their own premises or purchased from neighbors. Based on negative results on dairy farms and the use of milk, a negative finding was deduced and milk was excluded from further consideration.

Ice Cream:—The use of ice cream is indicated in the following table:

TABLE IV.—USE OF ICE CREAM. (Freeland).

Merk,	26 cases	Paul Fierso,	1 case
Gallagher,	1 case	In Hazleton,	1 case
Fox,	4 cases	None used,	681 cases
O'Donnell,	2 cases		
Farmigene,	1 case		711 cases

The data are conclusive so far as they could be obtained. It may be that to some extent children did have ice cream within the incubation period. This being short, however, the history is probably more accurate than is ordinarily obtained during an epidemic.

Ice:—The ice supply for the most part was artificial. Its use by patients is indicated in the following table:

*In Table II two of these Freeland cases are not included.

TABLE V.—USE OF ICE.

Johnson Ice Co.,	51 cases	Own supply,	1 case
Freeland Ice Co.,	58 cases	None used,	598 cases
Johnson and others,	2 cases		
John Trevaski,	1 case	Total,	711 cases

It is apparent from the history of the few patients using ice that the evidence offered does not warrant an opinion that it was the transmitting agent.

Uncooked Vegetables and Fruits:—It was common report that hucksters as well as local dealers of fresh fruits and vegetables, vended their supplies through the borough and collected old iron, rags and bones on the return trip. This was alleged to be responsible for the epidemic, probably through infection by bananas. An effort was made to inspect the grocery and other stores in which vegetables, fruits, etc., were kept for sale. Eighteen such places were examined and nothing was found to indicate a connection between these supplies and the outbreak, or to explain the existence of 711 cases of acute dysentery extending over a protracted period of two months. The itinerant vendors of fruit, celery, and so on, who proved not to be very numerous, were also sought out, and it was found that at least two such hucksters did sell their goods along the road from Hazleton to Freeland, a distance of six miles, and picked up junk and rags on the way back. The number of persons thus supplied between these places exceeds those trading with these hucksters in Freeland Borough, while the morbidity of that district is negligible and shows that this source of infection may be left out of account.

A new census of patients using uncooked foods was made. The data obtained were as follows:

TABLE VI.—USE OF UNCOOKED FRUITS AND VEGETABLES.

None,	662 cases	Bananas from vendor,	2 cases
Home grown,	16 cases	Unstated,	1 case
Farmer,	16 cases		
Stores,	11 cases		
Various,	3 cases	Total,	711 cases

On this basis the conclusions previously entertained were considered confirmed.

Meat:—It was likewise alleged that meat sold during special Monday sales by a store of the town was responsible because the meat was unfit for use. The store in question was one of a "chain." It was found that the supply for the Freeland, as for the Hazleton and other stores, was the usual class of meat sold at all times by these stores and known as "prime meats;" it was furnished by well known wholesalers, but because of an excess supply coming in car-load lots, was sold weekly at what appeared to be sacrifice figures. It could not be

shown that illness occurred among the purchasers of such meat in Hazleton and in other communities where the patronage was much larger than in Freeland.

Of meats likely to transmit pathogenic bacteria, which would have been sold in this store, veal would probably be the principal offender; in order to act as a transmissive agent it would have to be insufficiently cooked. Where diarrhoeal disturbances have been traceable to meat supplies, it has usually been shown to be due to underdone roasts of veal, the paratyphoid bacillus and the Gaertner types of bacilli being the pathogenic forms found. Prolonged cooking is, however, characteristic of the foreign-born and it would seem improbable that the bacterial forms contained in veal or any other meat could escape destruction. It will be shown later that nearly one-sixth of all patients were children under five years of age; it would seem unlikely that so large a number of small children would be given heavy meats even by the foreign born. The result of all investigation in this direction was uniformly negative.

METEOROLOGICAL DATA.

Among the influences alleged to be responsible for the epidemic, diurnal changes in temperature were persistently cited as a possible factor. Of course, this is not a tenable theory in relation to the morbid processes presented. In Freeland, however, the data were collected in order that the argument advanced might be properly refuted. The record of maximum and minimum temperatures taken in Freeland from June 1st to September 15th inclusive is as follows:—

TABLE VII.—TEMPERATURE (FREELAND)—JUNE 1st TO SEPTEMBER 15th.

Date.	June.		July.		August.		September.	
	8 A. M.	2 P. M.	8 A. M.	2 P. M.	8 A. M.	2 P. M.	8 A. M.	2 P. M.
1,	53	68	54	68	62	76	65	82
2,	50	66	60	74	64	82	67	88
3,	56	70	58	76	63	78	70	84
4,	53	64	56	86	62	82	58	80
5,	44	63	54	76	60	82	61	72
6,	50	71	56	78	62	80	59	70
7,	64	84	60	69	64	84	60	74
8,	68	90	62	80	70	90	48	64
9,	58	84	70	86	74	96	40	60
10,	59	86	69	83	70	90	38	64
11,	65	87	64	84	69	81	42	65
12,	66	80	70	86	59	82	40	69

TABLE VII.—Continued.

	June.		July.		August.		September.	
	S A. M.	2 P. M.	S A. M.	2 P. M.	S A. M.	2 P. M.	S A. M.	2 P. M.
13,	60	73	65	82	54	74	42	62
14,	58	69	64	70	60	77	46	68
15,	58	68	65	76	64	80	43	72
16,	42	62	70	82	61	72		
17,	41	69	72	90	67	86		
18,	66	72	69	84	74	96		
19,	58	70	60	73	73	90		
20,	49	64	54	82	72	86		
21,	58	78	63	84	70	80		
22,	66	82	60	81	62	84		
23,	70	88	68	91	70	82		
24,	72	92	64	80	68	79		
25,	64	84	66	84	50	70		
26,	61	82	70	92	54	71		
27,	60	80	69	92	63	74		
28,	63	68	63	72	62	68		
29,	62	74	51	70	60	66		
30,	46	69	60	72	62	72		
31,			62	70	63	78		

It appears that radical changes in temperature did not occur during the period of the epidemic.

The data on which to base the limits of incubation periods were meagre. A few cases led to the belief that at least seven days elapsed before the clinical signs and symptoms were in evidence. The majority of cases, however, developed within forty-eight hours. It is not apparent how wide variations in temperature could reasonably account for the morbidity.

It is conceivable that depression of the sympathetic nervous system, followed by "colliquative diarrhoea" might occur following prolonged high barometric pressure, but this would not give rise to the severe primary enterocolitis, which marked the cases in this epidemic. There is however, no record of severe or prolonged atmospheric changes of this character; in fact, Freeland occupies such an altitude that increase of pressure is largely nullified by the active air movement.

Water:—The history of the use of water by the Freeland patients is shown in the following table:

TABLE VIII.—USE OF WATER (FREELAND).

Freeland Water Co. only,	618 cases
Freeland Water Co. and Springs,	11 cases
Freeland Water Co. and Drifton supply,	13 cases
Freeland Water Co. and Markle supply,	20 cases
Freeland Water Co. and Upper Lehigh supply,	5 cases
Freeland Water Co. and drilled well,	1 case
Freeland Water Co. and Jeddo supply,	9 cases
Freeland Water Co. and Spring-Keiper Coal Co.,	1 case
Freeland Water Co. and Various,	2 cases
Freeland Water Co. and Drifton and Upper Lehigh,	1 case
	711 cases

It is to be noted that every patient used the water furnished by the Freeland Water Company and that 648, or over nine-tenths, used that water only.

The history and description of the Freeland Water Company's system and operation are contained in the special report of S. R. Parke, Jr., Assistant Engineer. As, however, the distribution of infection parallels the water distribution and as all other possible agents of transmission were excluded from consideration, it is necessary to show the relationship between infection and the use of water by detailing certain features included in his report.

The water was obtained from bored wells in two locations, one, Pump Station No. 1, being located at the Eastern border of the central section of the borough, and the other, Pump Station No. 2, located at the extreme Northern and Eastern border of the borough.

According to drainage and to water distribution the borough may be divided into two portions. The drainage north and northeast is directed toward Station No. 2 from a maximum elevation of probably two hundred or more feet above the station. This portion of the borough is not sewered, the higher portions being covered with closely set dwelling houses and sewage disposal being for the most part into leaching cesspools. Near the lowest portion of this section several wells have been abandoned as sources of water supply since the boring of the Water Company's wells at Station No. 2 in 1906 and 1909. The history of the loss of water from these private wells is clearly given by property owners. On at least three premises the wells were converted into cess pools, the most recent being in June, 1914. The drainage of the southern portion of the borough is less precipitous. This section is sewered and the well history negative.

On the western border of the central portion of the borough (on Walnut St.) a reservoir is maintained for the receipt of surplus water from the distributing system and providing for night consumption and fire service. It has a capacity of approximately half a million gallons.

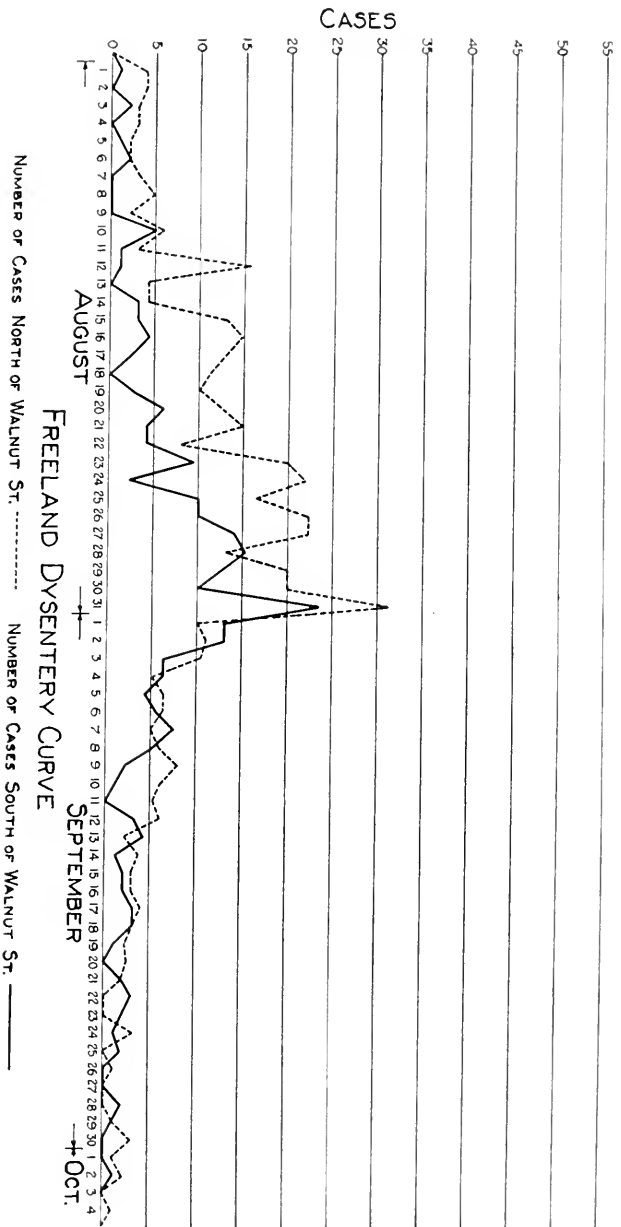
The principal distribution mains from both pump stations become parallel at the eastern end of Walnut Street and continue parallel to the reservoir at the western end. Laterals to the southern portion of the borough are taken off from Station No. 1 Main and to the northern portion from Station No. 2 Main. There are three connections between the parallel mains.

The period of pumping from Station No. 1 is usually from noon to five or six o'clock and occasionally for two hours more during the evening. From Station No. 2 the period is from seven o'clock in the morning to three or four in the afternoon. The head maintained is such as about to equalize the pressure in the two piping systems. From these data it would seem that there are marked differences of supply to the two portions of the borough, using Walnut Street as a dividing line. Water from Station No. 1 alone would supply the Southern portion during the afternoon and from Station No. 2 the Northern portion alone from seven in the morning to four in the afternoon. During the night and morning the Southern portion would receive a mixed supply from the reservoir and probably in part during the morning by connection with the Northern portion from pump Station No. 2. From about four in the afternoon to seven in the morning the northern portion would receive only the mixed supply from the reservoir. It was inferred that the northern district would thus get a larger proportion of the water from Pump Station No. 2 with whatever danger was involved, because the water of this station was apparently more subject to pollution.

A study of the population based on the number of dwellings and the average size of the family showed practically an even distribution north and south of Walnut Street.

On the contrary the distribution of patients was markedly unequal, two-thirds of the cases residing north of Walnut Street and for the most part receiving water from Station No. 2. This is shown graphically in the chart, and may also be made evident by an examination of the times when the infection manifested itself in these two parts of the town.

The dates of onsets of cases in accordance with their residence north and south of Walnut Street are as follows:



Number of Cases North of Walnut St.

Number of Cases South of Walnut St. _____

FREELAND DYSENTERY CURVE

AUGUST

SEPTEMBER

+ Oct.

CASES



TABLE IX.

Dates of Onsets By Districts of Water Distribution.

	North of Walnut St.	South of Walnut St.	Total.		North of Walnut St.	South of Walnut St.	Total.
July 20,	1	0	1	September 1, ...	10	13	23
July 25,	1	0	1	September 2, ...	11	13	24
August 1,	4	1	5	September 3, ...	10	6	16
August 2,	4	0	4	September 4, ...	5	6	11
August 3,	3	2	5	September 5, ...	6	4	10
August 4,	3	0	3	September 6, ...	6	5	11
August 5,	1	1	2	September 7, ...	5	7	12
August 6,	2	2	4	September 8, ...	6	5	11
August 7,	3	0	3	September 9, ...	6	2	8
August 8,	5	0	5	September 10, ..	6	1	7
August 9,	2	0	2	September 11, ..	5	0	5
August 10,	6	5	11	September 12, ..	6	2	8
August 11,	3	1	4	September 13, ..	2	4	6
August 12,	16	1	17	September 14, ..	4	1	5
August 13,	4	0	4	September 15, ..	3	2	5
August 14,	4	3	7	September 16, ..	3	2	5
August 15,	13	3	16	September 17, ..	4	3	7
August 16,	15	4	19	September 18, ..	3	3	6
August 17,	13	2	15	September 19, ..	2	1	3
August 18,	11	0	11	September 20, ..	3	0	3
August 19,	10	2	12	September 21, ..	2	2	4
August 20,	12	6	18	September 22, ..	0	3	3
August 21,	15	4	19	September 23, ..	0	2	2
August 22,	8	4	12	September 24, ..	3	1	4
August 23,	20	9	29	September 25, ..	0	2	2
August 24,	22	2	24	September 26, ..	1	0	1
August 25,	16	10	26	September 27, ..	0	0	0
August 26,	22	10	32	September 28, ..	0	2	2
August 27,	22	14	36	September 29, ..	1	1	2
August 28,	13	15	28	September 30, ..	3	0	3
August 29,	20	13	33	October 1,	1	0	1
August 30,	20	10	30	October 2,	2	1	3
August 31,	31	23	54	October 3,	0	0	0
				October 4,	1	1	2
					463	243	711

463=66% 243=34%

Two-thirds of the cases were north of Walnut Street.

It is noted that two-thirds of the patients were north and one-third were south of Walnut Street. This is somewhat more distinctly shown in the tabulation by weeks.

TABLE X.

	North.	South.
August.		
First week,	21 cases	6 cases
Second week,	40 cases	10 cases
Third week,	80 cases	21 cases
Fourth week, (including fraction),	194 cases	110 cases
September.		
First week,	53 cases	54 cases
Second week,	37 cases	16 cases
Third week,	20 cases	13 cases
Fourth week (including fraction),	8 cases	11 cases

Sociological. Notable differences in housing conditions in the two portions of the borough were not found. The types of homes and the apparent financial resources of the occupants, while varying to a considerable extent, seemed to be equally apportioned to the dis-

tricts north and south of Walnut Street. The sanitary conditions likewise bore no relation to *primary* cases.

In fact, a plotted curve of primary cases brought out somewhat more sharply the predominance of cases north of Walnut Street and the parallelism between water distribution and date of onset with lines of case distribution. The well-to-do and the poor alike contributed to the morbidity. Nationality was of no influence.

TABLE XI.—NATIONALITY.

American born (including children of foreign born parents),	290	Polish,	126
English,	13	Slavish,	117
Irish,	5	Hungarian,	2
Welsh,	1	Italian,	24
German,	45	Greek,	64
Austrian,	5	Russian,	6
Dutch,	2	Hebrew,	7
		Lithuanian,	4
		Total,	711

This table shows that 421, or 59.2%, were of foreign birth. It has already been stated that 69% of the total population in 1910 was either of foreign birth or of mixed parentage. In Table XI the children of foreign born parents are included under "American born." If this increment were added to those of foreign or mixed parentage, it would doubtless increase the 59% morbidity to 69%, in this way balancing the ratio of foreign born to American born in the morbidity of foreign born to that of American born.

The distribution of cases by households emphasizes the susceptibility to the causative bacteria.

TABLE XII.—DISTRIBUTION BY HOUSEHOLDS.

1 case each in.....	250 houses	250
2 cases each in.....	72 houses	144
3 cases each in.....	38 houses	114
4 cases each in.....	11 houses	44
5 cases each in.....	13 houses	65
6 cases each in.....	7 houses	42
7 cases each in.....	3 houses	21
9 cases each in.....	2 houses	18
13 cases each in.....	1 house	13
	397 houses	711 cases

Of 397 households 147, or 37 per cent. had two or more cases. It is unusual to find one-third of all infected premises having more than one case presented, except in a true bacillary dysentery. A review of this point as occurring in previous epidemics in Pennsylvania would seem to confirm this statement.

The more important point, however, developed by the above table is confirmation of the nature of the morbid process. Inorganic

poisons have never been known to have so general a distribution. Only the presence of pathogenic bacteria or their toxic products would explain the outbreak.

During this epidemic it was necessary to develop this evidence because of the widespread variety of ideas as to the cause, some of which originated with the medical profession and were harmful to investigative and administrative measures.

The susceptibility at various ages is indicated in the following tables:

TABLE XIII. DISTRIBUTION BY AGE AND SEX. (FREELAND).

Age (years).	Male.	Female.	Total.	Age (years).	Male.	Female.	Total.
1	21	29	50	40-41	17	14	31
2	23	25	53	45-49	18	7	25
3	11	14	25	50-54	10	15	25
4	13	12	30	55-59	9	7	16
5	12	10	22	60-64	8	4	12
6-9	45	43	88	65-69	7	8	15
10-14	37	31	68	70-74	4	1	5
15-19	31	31	62	75-79	1	1	2
20-24	35	23	58	80-84	1	1	2
25-29	21	20	51				
30-34	22	20	42		372	339	711
35-39	16	13	29				

TABLE XIV. MORBIDITY BY AGE PERIODS AND SEX.

Age periods.	Male cases.	Census 1910.	Per. ct. morbidity.	Female cases.	Census 1910.	Per ct. morbidity.	M. & F. Per ct. morbidity.
0-4	78	415	19	80	447	18	18.3
5-9	57	375	15	53	383	14	14.5
10-14	37	352	10	31	359	9	9.6
15-19	31	344	9	31	351	9	8.9
20-44	111	1,265	9	100	1,036	10	9.2
45 & over	58	453	13	44	409	11	11.8
	372	3,206*	11.6	339	2,985	11.3	11.5

*And six males, age unknown. Total population 6,197.

Figures for the five year periods after the twentieth year were not obtainable.

By the above the morbidity is shown to have been 11.5 per cent. of the total population, being evenly apportioned between males and

females. The highest degree of susceptibility was shown by children, especially those under five years of age. In confirmation of the opinion that the focal point was in Freeland, a discrepancy will later be shown between the susceptibility by age periods of cases occurring in Freeland and Drifton respectively.

The occupation of patients is shown in the following table:

TABLE XV. OCCUPATIONS.

Unemployed (majority under 6 yrs.),	196 cases	
School,	139 cases	
Housework,	154 cases	
	-----	489 cases
Mines,	96 cases	
Unemployed adults (over 50 yrs.),	12 cases	
Various, (males, 91; females, 23),	114 cases	
	-----	222 cases

The striking feature in this table is that 489, or 69 per cent. of all cases, were women and children whose activities would not take them from home or school except on the occasions of picnics and festivals. For the most part the latter are held under the auspices of religious organizations or by families speaking a common tongue. Even had infection been acquired during such gatherings it would be necessary to have daily outings attended by the greater part of the population in order to give rise to such a series of onsets as is in shown in Table II.

In addition, Table XV tends to confirm the opinion that the infection was transmitted by water. As estimated, upwards of nine-tenths of all males of a suitable age in Freeland are employed in or about the mines. There are approximately over two thousand males of working age but only ninety-six men employed in or about the mines developed the disease, and a fairly large proportion of these ninety-six were classed (from census studies) as secondary cases. It is the custom for miners to carry cold tea to work and to use malt beverages when off duty. Also, it is noted that of the estimated ten per cent. of all males employed in the borough as merchants, clerks, teamsters, etc., ninety-three developed the disease. This disproportion seems to mean but one thing—that those employed in civic or mercantile pursuits were more frequently exposed to the infection, or that they used some transmitting agent more constantly. Nothing except water could be found by means of which these differences by occupational groups could be accounted for.

Secondary Cases. About fourteen per cent. of the total number of cases were counted as secondary cases, the record being as follows:

TABLE XVI. SECONDARY CASES.

Infected by visits to other cases,	14 cases
Infected by cases on the same premises:	
Infected in 15 houses having 2 cases each,	15
Infected in 14 houses having 3 cases each,	18
Infected in 3 houses having 4 cases each,	4
Infected in 4 houses having 5 cases each,	4
Infected in 2 houses having 6 cases each,	2
	43 cases
Unaccounted for,	43 cases
	100 cases

Fifty-seven of the secondary cases occurred north of Walnut Street, and forty-three in the district south of Walnut Street.

This high rate of secondary infection was easily explained by the wretched domestic hygiene of the households in which they mostly occurred. Isolation of patients was not undertaken except by the most intelligent and not always even by this class; disinfection of discharges was not practised until after the arrival of your representatives, and then only in a few families.

Mortality. In Freeland Borough there were fifty-six deaths, a fatality of nearly eight per cent. The deaths of the entire epidemic numbered eighty-one, which means a fatality of 8.4 per cent. of the 965 cases. The distribution by age and place follows:

TABLE XVII. MORTALITY.

	Freeland.	Drifton.	Upper Lehigh	Jeddo.	Townships.	Total.
1 month	0	1	0	0	0	1
2 months	1	0	0	0	0	1
3 mo.	3	0	0	0	0	3
4 mo.	0	0	0	0	1	1
5 mo.	3	0	0	0	0	3
6 mo.	0	1	0	0	1	2
7 mo.	5	0	0	0	0	5
9 mo.	6	0	0	0	0	6
11 mo.	0	1	1	0	0	2
1 year	16	2	1	1	2	22
2 yr.	6	1	1	0	1	9
3 yr.	2	1	0	0	0	3
4 yr.	1	2	0	0	0	3
5 yr.	1	0	0	0	0	1
6-14 yr.	4	4	0	0	0	8
15-19 yr.	1	0	0	0	0	1
20-29 yr.	1	0	0	0	1	2
30-39 yr.	3	1	0	0	0	4
40-49 yr.	1	1	0	0	0	2
50-59 yr.	1	0	0	0	0	1
60+	1	0	0	0	0	1
	56	15	3	1	6	81

In Freeland there were forty-three deaths of persons under five years of age, or 76.8 per cent. of the total mortality for that borough. These were distributed as follows:

Under one year, 18 or.....	41.9 per cent.
From one to two years, 16 or	37.2 per cent.
From two to three years, 6 or	13.9 per cent.
From three to four years, 2 or	4.7 per cent.
From four to five years, 1 or	2.3 per cent.

FEATURES OF CASES OUTSIDE OF FREELAND BOROUGH.

Only the essential features of cases occurring outside of Freeland Borough are presented. The necessity of detailing all of the epidemiological data seems to be so slight that they are not included in the report but are on record in the files of the Department for reference. The distribution of the total morbidity is detailed in Table I. Two hundred and fifty-four cases occurred in places other than Freeland, including twelve villages or boroughs and two townships. Freeland is immediately accessible to all of these with the exception of Beaver Meadow Borough, Carbon County.

Freeland is a social and business centre and visitors to the borough who later developed the disease were found to constitute the majority of the outside primary cases. The epidemiological studies of these cases did not give data which would in any way change the conclusions drawn from the studies in Freeland; in fact, where it was possible to secure accurate information from the foreign born (among whom the morbidity for the most part occurred), the disease could be traced to Freeland or to contact with cases from Freeland.

Drifton. Certain striking features were found in tabulating the Drifton cases. The residents of Drifton use water from entirely different sources of supply. (A report on the Upper Lehigh, Drifton, Jeddo, and other water supplies was made by Engineer Parke. It is sufficient to relate that all findings regarding these water supplies were negative.) Early cases in Drifton were for the most part adults or children old enough to visit frequently in Freeland. The age and sex of the Drifton cases are noted in the following table:

TABLE XVIII. DRIFTON MORBIDITY.

Age. by yrs.	Age and Sex.		
	Male.	Female.	Total.
1,	2	3	5
2,	3	4	7
3,	2	4	6
4,	1	5	6
5,	2	1	3
6-9,	15	12	27
10-14,	12	6	18
15-19,	6	12	18
20-24,	5	5	10
25-29,	5	1	6
30-34,	1	3	4
35-39,	5	3	8

TABLE XVIII—Continued.

Age.	Male.	Female.	Total.
40-44,	3	5	8
45-49,	2	3	5
50-54,	3	0	3
55-59,	1	0	1
60-64,	1	0	1
65-69,	1	0	1
Total,	70	67	137

It is seen from this that the age groups mostly affected were those of the mobile class who visited Freeland frequently, and is in direct contrast with the table on the ages of Freeland cases. The occupation of Drifton cases confirms this point:

TABLE XIX. OCCUPATION (Drifton).

Unemployed (majority under 6 years),	28
School,	45
Housework,	22
Mines,	36
Various,	6

137 cases

All possible *local* Drifton agents of infection were negative. These same findings were noted in varying proportions in the tabulation of cases from every other community.

EPIDEMIOLOGICAL CONCLUSIONS.

No agent of transmission was developed during the investigation which might be considered responsible except one. This agent paralleled the distributing lines of the Freeland Water Company's supply, and in particular the distribution from Pump Station No. 2. The analysis of water specimens made in the Department Laboratories gave low total counts; of forty-eight specimens, the highest count was ninety-six. *B. coli* were uniformly absent except in a dipped specimen from the basin at Station No. 2, which gave a count of one to each cubic centimeter. Hypochlorite of lime treatment became operative on August 31st. By referring to the table it will be observed that the onsets decreased rapidly after that date.

Freeland is built upon a hill which extends upward through surrounding coal measures and continuous with the sub-strata found below the coal and rock common to that section of the state. The pump stations are located within the borough but on lower levels than the major portion of the town. At station No. 1 the only well in use is 380 feet deep, the casing extending sixty-two feet below the surface. Another well, not in use, but in the shaft of the dug well in which both bored wells are located, is 280 feet deep, cased to sixty-two feet. It is probable that both wells take water from the same

level, the flow entering at 191 feet. The geological record notes "24 feet hardpan, 187 feet green sandstone, and 169 feet red shale in order mentioned from the surface."

At Station No. 2 there are two wells in use, 380 and 485 feet deep respectively. The records note, "8 feet quicksand, 32 feet hardpan, and the remainder red shale." The wells are cased to fifty-six and seventy-eight feet respectively below the surface. The flow is obtained at the two-hundred foot level and it is believed from pumping data that the wells are connected by a fissure.

Other sources previously in use are described in the Engineer's report. They were of no importance in connection with the present sources as factors in the epidemic.

The topography of the drainage area surrounding Station No. 2, the presence of cesspools and privies and the history of wells made useless by the installation of the Water Company wells would seem to indicate a constant menace to water pumped at this Station.

It is known that the ground was saturated during the early summer months, some owners of property measuring the saturation by the overflow of leaching cesspools. The records of precipitation for this region were carefully examined. They indicate large rainfalls early in June and again in the fourth week of that month. In July there were heavy rains on the tenth, fourteenth, and twenty-seventh, all within brief periods of time.

On September 11th, Dr. W. H. Meeker, Chemist, and Dr. Joseph McFarland, Bacteriologist, studied the water system, topography, and water supplies for the Freeland Water Company. The results of their analyses represent the conditions found ten days after the use of hypochlorite of lime was begun. They state that the "water (from Station No. 1) proved to be perfect in quality and purity." From Station No. 2, "the water proved distinctly inferior" to the other. It "contained a very few colon bacilli. The number is so small that no colonies could be found upon the plates, though fermentation was induced when one cubic centimeter of the water was added to sugar media. This is, however, sufficient to condemn this water in the eyes of most sanitarians, as there should be no colon bacilli in pure water, and none discoverable in less than ten cubic centimeters of a presumably potable water." "The results are that the water from Station No. 2 seems to have some slight contamination. With regard to possible sources of contamination from what I saw and learned while in Freeland, would conclude after a study concerning the location of privies and of the apparent geographical condition, that the rock strata sloped from the town toward the wells

and especially toward well No. 2; that the privies and cesspools accompanied from the surface drainage are to blame."

The reports of the Department Laboratories and the investigators mentioned are consistent and agree in so far as they correspond in method. It would not be practicable for the State to make more than the usual bacteriological determinations. It is possible, however, by finer methods of analysis to determine minute traces of pollution, such as would be discoverable during a rapid and automatic correction following chance pollution.

To recapitulate: the epidemic of bacillary dysentery in Freeland and vicinity had its origin in the Borough of Freeland, the evidence being found in the appearance of cases first and in maximal numbers in that Borough, according to the data set forth in this report; it was not due to transmission by any agent likely to become polluted with excrement except water. The only evidence against the diagnosis of a water-borne infection would be based on negative bacteriological findings in the Department Laboratories. As has already been indicated, this alone is insufficient to form more than a presumptive opinion in the presence of a rapidly subsiding pollution of surface or sub-surface origin.

The evidence that the water was the transmitting agent is found in the history of the rainfall and ground saturation in an unsewered drainage area in which is located the probable source of the suspected public water supply; in the gradual but constantly increasing morbidity, in consonance with supersaturation, and the abrupt decrease in morbidity coincident with water disinfection; in the distribution of cases in location and in sequence parallel to water distribution from the suspected source; and in studies of age, occupation, and susceptibility of patients. To this may reasonably be added the findings of investigators employed by the water Company itself.

The epidemiological opinion, therefore, is bacillary dysentery transmitted by water supplied from Pump Station No. 2 by the Freeland Water Company.

REPORT OF AN INVESTIGATION OF SUPPOSED CASES OF ANTHRAX IN COLUMBIA COUNTY.

In accordance with your telegram of Thursday evening, and your letter received Friday last, I visited the home of John Galle, in

Berwick, who as I understand has been diagnosed as having Anthrax.

After a careful examination in conjunction with Dr. Hensyl, I was not entirely satisfied on account of my inability to understand him and I thought the physician and nurse made many guesses in explaining his replies, etc. Therefore, the next day I went to his home with an interpreter, but elicited but little more information, except that he washed his hands twice each day at the works before going to his home.

The story of the patient is that a hot rivet fell on his left hand while at work making what are called screens, that are made of new pine lumber and new nails and are used to prevent accidents to the workmen while building steel cars where a padding of hair is used for insulation made by a firm in Trenton, New Jersey, called the Johns Manville Co. and consists of hair quilted between two layers of muslin, but from whom or where the New Jersey firm gets the hair I am unable to say.

I would also state, John Galle worked for three days after receiving the burn and then brushed the scab from the wound on his left hand when it itched and bothered him in some way.

He denies that he used any of the hair as a scrub brush in cleaning his hands, and on my visit to the plant it was stated that the men never used anything of the kind, although I found a piece of cotton waste that had been used in that way on the sill of the car door opposite the wash stand where John Galle and others washed themselves.

I could not learn he had handled any phosphates or burlap bags or other material which might have contained the germ of anthrax, but he surely has a very bad arm, much inflamed, purple in color to a great extent. No pus but much induration, etc., and very unlike any case of ordinary infection I have ever seen.

In the case of Reuben Shuman, of Catawissa, I found not so marked and extended infiltration and swelling, but the same lack of pus, dark purplish red infiltration, elevation very marked on the parts affected, which consisted of two spots an inch and a half or more in diameter in the right hand with an elevation of probably a quarter of an inch above the surrounding surface, while the spot on the chin was about the size of a dime with the same characteristics.

He had skinned a dead bull for Mr. Henry J. Miller, of Catawissa Township, which he thought had died of acute indigestion, as both stomachs were filled with the refuse of timothy hay, which had been left from the machine used in bailing all the hay they sold

from the farm, and it was judged that he had overeaten of the heads, etc., as there was no mark of any kind on him accordingly to the statement of Mr. Shuman.

I am also informed that James Terwilliger, of Bloomsburg, helped Reuben Shuman skin the dead bull. He had cuts on his hands, as I understand, the same as Mr. Shuman from corn husking, but had had no trouble of any kind and as I hear, is perfectly well, but I have thus far been unable to see him.

Dr. G. H. Welliver, the veterinary surgeon informed me that there was no evidence of anthrax on Mr. Miller's farm and the two hogs that had died, one before and one after the death of the bull had died of hog cholera, and he stated the bull had been buried at least three hundred feet distant from the source of any water supply and four feet below the surface.

If I had not expected to be able to see James Terwilliger, I would have reported earlier, but I cannot wait longer to see him, and I judge from reports it would do no good anyhow.

REPORT OF AN INSPECTION REGARDING A CASE OF ALLEGED LEPROSY AT WILKES-BARRE.

Pursuant to your instructions I went to Philadelphia on September 18 and, after obtaining supplies at the Laboratories of the Department, proceeded to Wilkes-Barre to examine a man thought to be a leper, and to learn what facilities existed for taking care of him if he proved to have leprosy. I beg to submit the following report:

The patient, J. N., a Syrian, aged thirty-one years, fourteen years a resident of the United States, eight years a resident of Wilkes-Barre, married, by occupation wire drawer in a steel mill, residence No. 117 Blackman Street, Wilkes-Barre, gives the following history:

Personal and Family History: So far as he knows, he was born of parents in good health, about thirty-one years ago in the little farming village of Matin (?) in central Syria. The family followed farming and lived in the village as is the custom in that section of Syria going to and from the farm fields each day.

An elder sister states that in his early infancy he was very frail and that for about three months he was kept wrapped in cotton:

a series of sores are said to have developed at that time, and certain lesions to be described later may perhaps date back to that period.

He is said to have had two sisters and two brothers who lived to grow up, and one brother who probably died in early childhood. Of the remaining brothers and sisters, one is now living in the Argentine Republic, South America, one is in Syria; one sister and one brother live near him in Wilkes-Barre. All are believed to be in good health. His father died when J. N. was a young man; his mother is living in Syria and is well so far as known, and has reached the age of eighty years.

No history could be obtained of any disease in any way resembling leprosy in any relative on either the maternal or the paternal side. Nor could J. N. give any information concerning any serious illness except that mentioned in infancy.

Leaving the farming village in Syria at the age of seventeen, he came to America some time during 1900 and soon began work in a tannery at Sayre, Pennsylvania, handling hides and devoting a good part of the time for a year to the clipping of hair from the hides, working in the tannery for about two years. For several years thereafter he worked as a laborer in a railway construction and repair crew. Eight years ago he came to a steel mill in Wilkes-Barre, the Hazard Wire Rope Works, and obtained employment at wire drawing, an occupation which he followed for nearly seven years, and which brings the face and hands of the worker into the presence of intense heat and in a direct current of air from an electric fan.

Environment: The home in Syria is said to have been a humble one; at Sayre he lived in a company house near the tannery with the usual surroundings of a company house, but so far as he knows the community enjoyed good health and his neighbors, as he asserts, were all in good health. Coming to Wilkes-Barre eight years ago, he resided at No. 9 McGarragher Street for several years in a fairly good house of cheap construction; from there he moved to No. 178 High Street, residing in this dwelling but a month and a half. He then moved to No. 109 Blackman Street, remaining there for more than two years, when he purchased the house and removed to his present address, No. 117 Blackman Street.

He is quite sure that they have been troubled with bed bugs in each of the three houses in Wilkes-Barre in which they lived and also in Sayre, the wife reporting that she burned her mattresses on an average once in every two years.

Both of the Wilkes-Barre houses in which he recently lived have been infested with rats, many of them having been trapped by the

householder, but so far as he is aware none of them have shown any areas denuded of hair or any sign of disease of the skin.

No domestic animals or pets of any kind have ever been kept about the dwelling.

No history of body lice could be obtained and a history of head lice was denied although the denial did not seem to come from the heart.

Conjugal History: Eleven years ago he married Martha G——, daughter of a Syrian descended from healthy parents—no history of anything resembling leprosy being obtainable in the families of either her father or mother.

Two children have been born of this union, Leo, February 25, 1909, and George, January 21, 1912. Both children present the appearance of good health. George has an interesting webbing of the second and third fingers of each hand.

The wife presents every appearance of good health and denies ever having had miscarriages. Venereal disease is denied by both husband and wife.

Present Illness: About two years ago, sometime during the early summer, he noticed a series of small hard lumps developing over the forehead near the eyebrows approaching the root of the nose and a little above it, the skin lesions apparently coming on after an acute cold affecting the nose and was believed by him to be the result of the excessive heat at his work with an electric fan blowing directly in his face. The eruption on the forehead and about the eyebrows is said to have increased during the first summer and to have largely disappeared during the following winter, and he apparently believes that the eruption during the second summer was not as marked as it was a year earlier. There is no history of an acute urticaria preceding the present eruption. One year ago he discontinued work largely because of the facial involvement.

Treatment: About a year and a half ago he consulted Doctor Ernest, of Wilkes-Barre, and was told he would have to take treatment for a long while. For a short time he took what was probably mercury. The patient thought the skin eruption improved while taking it but complained of severe abdominal pains and never consumed all of the tablets.

About six months ago he consulted Doctor Butler both for the skin lesions and for some trouble with his nose. The physician probably removed something from his nostrils under a local anesthetic. An interview could not be obtained with the physician so we are not sure what was done.

He visited Doctor McLaughlin at one time for treatment of the nose. About a week ago, Doctor McLaughlin told him to go to Philadelphia where it was thought he could secure treatment in the City at the Pennsylvania Hospital. It appears that the only diagnosis made by the physicians in Wilkes-Barre was that of syphilis and that he was sent to Philadelphia more to get expert advice and free treatment than for any other reason. He was probably advised to tell the Hospital authorities in Philadelphia that he had been living in the City for six months, otherwise, he would not be admitted for treatment.

He is said to have gone from Wilkes-Barre to Philadelphia by the Lehigh Valley line, leaving Wilkes-Barre in the morning of September 10th. He was refused admission to the Philadelphia General Hospital on the 11th of September, and on the 12th of September applied for admission at the Pennsylvania Hospital where a diagnosis of tubercular leprosy was made. He was detained and later in the day removed to the Philadelphia Hospital for Contagious Diseases, where the diagnosis was again made, both on clinical evidence and, it is said, on a Laboratory study of sections of tissue. He is also said to have given a mildly positive Wassermann reaction.

Physical Condition: A dark skinned, well nourished male about five feet, eight inches in height, weighing about a hundred and sixty pounds erect in carriage, well formed head with good growth of black hair, showing a slight sprinkling of gray; forehead and eyebrows show numerous tubercles slightly elevated and varying in size from circular elevations an eighth of an inch in diameter, probably coalescing from smaller elevated lesions, to nodules of from a quarter of an inch in width to half an inch or more in length—one such nodule almost merges into another large or small one as seen in the right eye brow. They show well in the photograph now in the files. The brows are thickened and beginning to overhang. There are several tubercles of varying size above each cheek and several on the front part of the neck, one especially pronounced under the chin, and two smaller ones are seen on the posterior dependent portion of the lobe of the right ear. One of these ear lesions somewhat resembles a small wart. Eight or ten tubercles, varying in size from an eighth to a quarter of an inch in diameter, with smooth surfaces and one having an umbilicated centre are visible on the back of the neck, as are also several loose papillomata. On the backs of both wrists and on the lower forearms also are a number of small flat tubercles, and on each wrist is a scar of recent origin

said to be the site from which tubercles were removed in Philadelphia. The skin over these tubercles is generally normal in color, but in a few it is dusky red.

A series of scars resembling healed ring worms are present over each hip, some of them are as large as a silver dollar in diameter, others slightly depressed, all varying in size down to that of a dime, believed by the patient to have existed since infancy, and are possibly a result of chafing when he was kept in cotton for three months in his babyhood.

The skin over the crest of each shin is a darker brown than would be expected in a Syrian, is thin, slightly scaly and lifeless; along the external plantar surface of each foot is a series of reddish-brown pigmented areas of skin a quarter of an inch in diameter.

The cervical glands are slightly palpable, the epitrochlear glands are much enlarged, the axillary and inguinal glands are not palpable.

Rough tests of the skin by means of pin pricks, pinching, etc., fail to show any areas of anesthesia. The eyesight seems to be good although no careful tests were made. The mouth presents no abnormalities and the teeth are fairly well preserved. There is a completely denuded raw surface on each side of the nasal septum, somewhat irregular in shape, each being about as large in diameter as a cent. The septum is so thin that light shines through it readily. Some bleeding occurred from these areas while I was securing smear preparations from them. A rough physical examination of the heart and lungs showed no particular deviation from the normal.

The left ulnar nerve is distinctly palpable at the left elbow, and when rolled under the finger seems to have twice its normal thickness. The right ulnar nerve appears to be normal in the same location.

For the purpose of securing specimens for laboratory study, I injected a weak solution of novocain and removed from the left eyebrow a somewhat isolated friable tubercle fully half an inch long and a quarter of an inch broad and a similar tubercle fully an eighth of an inch in diameter from behind the right ear. These were dropped into a formaldehyde solution especially prepared by Doctor Rucker.

Blood was taken for smears on slides and for smear cultures, at each incision and also from tubercles which were constricted and punctured so as to make the blood ooze directly through them. About five cubic centimeters of blood were removed from the external cephalic vein and submitted for a Wassermann test.

Scrapings from the tongue and from denuded areas in each nostril carefully spread on slides and cultures from the nose were delivered to the laboratory with their blood and tissue.

Photographs were secured of the various areas of the patient presenting tubercles and of the man himself with the expectation that they would have scientific interest and might be helpful in following treatment or in locating him should he escape quarantine.

Photographs were also secured showing his wife and two children grouped with him, and of the other four inmates of the house—his brother-in-law, Abraham G——, his wife, Barbara, and two children, Mary and Sarah. Rough descriptive notes of each of these individuals were made to accompany the photographs in case they should escape the parole supervision of Wilkes-Barre authorities.

Doctor R. S. Wadhams, deputy county medical Inspector, of Wilkes-Barre, assisted in the examination and in removing tissue, and will return to take out the few skin stitches inserted where tubercles were removed.

Disposition of Patient: After going over the question of immediate care and quarantine with Mr. Edwin B. Morgan, superintendent of public safety, it was determined that the brother-in-law, Abraham G—— and family, all of whom present the picture of health, might safely have an antiseptic bath, have their clothes disinfected, and be removed to the house of a relative near by who is willing to house them, and that the wife and two children of N. might be similarly treated, and that the house owned and occupied by N. should be placed under absolute quarantine for the present. An effort had already been made to disinfect this house with sulphur.

While in the office of the director of public safety, we conferred with the poor directors and found them very much against having the patient removed to some isolated spot on the county poor farm, but had no difficulty in persuading them to offer to give the usual indigent allowance for food maintenance. Arrangements were made to have the matter brought before the poor board for a more extended discussion at a meeting to be held within a few days.

Clinically, the condition resembles that of mild tubercular leprosy of about two years duration. The glandular stigmata simulate conditions seen in syphilis, and the laboratory tests show him to be syphilitic.

Dr. J. B. Rucker's report from the laboratory is as follows:—

"The case of J. N., leper, Wilkes-Barre, Pa.:

"Smears from the scrapings from the nose, tongue, ear, and eye-brow were received and stained with carbol-fuchsin, decolorized with ten per cent. nitric acid in alcohol and counter-stained with Loeffler's solution. Examined under the microscope there appeared among the detritus and micrococci, numerous aggregations of acid-fast, rod shaped microorganisms, about the size of a tubercle bacillus, if anything a little shorter than the human type of this organism, many of which were crowded together inside an epithelial cell or endothelial leucocyte—the so called leprosy globi—while others occurred single scattered throughout the smear. Most of these rod shaped, acid-fast bacteria possessed a homogeneous protoplasm but many were also seen which had from one to four dark granules in their protoplasm.

"These organisms took the red coloration with Baumgarten's differential method of staining as well as with the Ziehl-Nielsen carbol-fuchsin stain.

"Paraffine sections of tubercles excised from the eye-brow and left ear, stained as were the smears above, showed the leprosy bacilli in great numbers within the epithelial cells in bunches as well as free within the tissue.

"Sections stained with eosin and haematoxylin presented the following picture:

"Section from the eyebrow shows an epidermis which has largely lost its papillary arrangement. There is a break in its continuity, with the corium beneath densely infiltrated with mononuclear leucocytes. On the surface of the ulcer is a thin layer of red blood corpuscles. Growing over the ulcer from the margin is a rather dense, fibrous tissue.

"The corium is divided into small islands by a network of dense fibrous tissue. These islands consist of loose fibrous tissue, fat cells, lymphocytes, and endothelial cells. Throughout the specimen there are large numbers of hair follicles, almost all being surrounded by a thin band of dense fibrous tissue.

"Section from the ear shows tissue entirely surrounded by a thin layer of epithelium. Just beneath the epidermis is a dense fibrous tissue layer which in one or two small areas has undergone hyaline degeneration. The body of the specimen consists of fibrous tissue with young blood vessels and hair follicles and leucocytes.

"The complement deviation tests on the blood from the right external cephalic vein were positive, with the use of the three following antigens: Alcoholic Extract of Syphilitic Liver; Ether soluble and Acetone insoluble Lipoid; Lipoid from Duval's organism."

REPORT OF AN INVESTIGATION OF ALLEGED HOOF AND MOUTH IN HUMAN BEINGS IN SADBURY TOWNSHIP, LANCASTER COUNTY.

In accordance with your instructions I proceeded to Sadsbury Township, Lancaster County, on December 20th, in order to investigate the reported cases of "Hoof and Mouth" disease in human beings. The diagnosis had been established by Dr. George B. Hershey, Gap, Lancaster County, and reported by him to County Medical Inspector, Dr. J. L. Mowery.

In company with these two physicians a careful study of the clinical features and the collection of specimens for laboratory analyses were made on the date mentioned. The family consists of Abner Boose, Mrs. Abner Boose, and five children, post-office address, Paradise, R. D. No. 1.

Mr. Boose stated that on a date which he cannot name he purchased several young cows from a stock yard in Lancaster and that on or about November 12th he noticed an eruption on the udder of one of them. This condition was relieved with home remedies. Shortly afterward several other animals became sick, practically stopped feeding, showed marked salivation, and developed similar lesions on the udders. A diagnosis of Hoof and Mouth disease was established by agents of the State Livestock Sanitary Board on November 23, and on November 30th, eighteen head of cattle, eight hogs, and two dogs were destroyed.

Previous to November 23rd, Mr. Boose had sold all of his milk supply, amounting to from ninety-five to one-hundred pounds a day, to the Smyrna Creamery, Smyrna, Lancaster County. The Smyrna Creamery is one of the collecting points for Robert E. Powell, Dairyman, 884 North Forty-eighth Street, Philadelphia.

The first member of the family to show evidence of the disease was Beatrice, a child of three years, who developed her onset on or about November 20th. The next was Elsie, aged nine years, who became sick on December 9th; and then Ethel, aged sixteen months, on December 11th. It was impossible to secure an accurate description of all subjective phenomena which manifested themselves in the two younger children, but it is alleged that clinically the behavior of all three children was much the same. The history of Elsie, the oldest, shows that the onset was abrupt and marked by headache, aching of the extremities, difficulty in swallowing, and recurrent mild vertigo. It was evident that she had a considerable rise of temperature, noticeable particularly in the evening, associated with chilliness and, during the first week, mild delirium. The exact date of the appearance of lesions on the mucous membrane and skin cannot be fixed, but apparently it was within a few days after the development of the subjective symptoms. Ptyalism was a marked symptom, first observed at the time of the appearance of lesions. The latter are described as having been vesicular from the beginning; on the mucous membrane they lost their covering within a few days, leaving slight ulcers, which in every case healed with difficulty. They were observed on the buccal mucous membrane and the gums, on the margin of the tongue, and on the lips. They were not observed on the pharyngeal wall, uvula, or tonsils. In two of the cases there was a bloody discharge from the nose. The lesions on the skin occurred about the mouth, the alae of the nose, inner canthus of the eye, on the tips of the fingers—in one case simulating onychia—and in one case on the dorsum of the left wrist. They were not observed elsewhere.

On the date of the examination the first case, Beatrice, had entirely recovered. In the two other cases the lesions on the mucous membrane were practically healed and on the skin they were covered with an encrustation, yellowish to dark brown in color, varying in size from a split pea to a small soup bean, with irregular margins and, after removal of the crust, leaving an area of granulation tissue covered with a puriform discharge and but little free bleeding. The crusts were homogenous, not having a granular or flakey formation. The history of the lesions indicates that an inflammatory areola was not observed.

The clinical picture presented was that of an eruption on the skin and the mucous membrane of the oral cavity, appearing in fairly well nourished children, all having abrupt onset with severe constitutional symptoms, marked by cephalalgia and myalgia, increase of temperature, and ptyalism.

The lesions on the skin with the exception of the type of encrustation, resembled those of impetigo contagiosa. The crusts lacked the sulphur-like or granular character commonly seen in impetigo. The history of the lesions would seem to indicate, particularly if ptyalism be a guide, that those on the mucous membrane occurred prior to the greater number on the skin. Impetigo would seem to be excluded by the severe subjective symptoms, the marked disturbances of the mucous membrane in all cases, the type of the crusts, and the associated increase of salivary secretion. Ecthyma and the impetiginous pemphigus were thought of but were readily excluded by the history. The diagnosis made by Dr. Hershey was tentatively confirmed pending the studies of material collected and shipped to the laboratory. Separate specimens from the nose, pharynx, mouth, facial lesions, and finger lesions were collected. Owing to the advanced stage toward convalescence it was difficult to secure more than the most minute quantities. The laboratory report for each of the five specimens was "staphylococcus present in pure culture."

Dr. Hershey stated that he had considerable difficulty in treating the children, success being observed fairly rapidly after the exhibition of iron, quinine and strychnine with arsenic. The lesions were treated topically with sulphur and glycerin in petrolatum and some ten days ago with argentic nitrate.

REPORT OF AN INSPECTION REGARDING SMALLPOX IN BELLEFONTE.

On January 11, by your direction I proceeded to Bellefonte, Centre County, in compliance with the request of Dr. S. M. Huff, County Medical Inspector, and Dr. James L. Seibert, to establish a diagnosis of an eruptive disease, suspected to be smallpox.

The patient in question, a male, aged thirty-two years, employed by the Bellefonte Lumber Company, developed the onset on the night of January 1st and the eruption on January 5th. Believing he had chicken pox he did not call a physician and was first seen by Dr. Seibert in the evening of January 9th. Dr. Huff saw the patient on the following day. The diagnosis of smallpox was confirmed by your representative on January 11th.

A conference with the local Board of Health was at once requested. It appears that the Board of Health had been inactive for upwards of four years but the office of Secretary was in a sense held in perpetuity by H. C. Quigley, Secretary. Reorganization of the Board had not been effected since January, 1911.

A search of Council Records was made with the approval of Mr. Harry Keller, President, and W. T. Kelly, Clerk. The following appointments had been made:—Dr. J. L. Seibert, appointed January 1908, for three years, Dr. W. J. Locke, appointed April 1909, to fill unexpired term of Dr. G. F. Harris (deceased); Dr. David Dale, appointed December 1909; Dr. G. H. Hayes, appointed November 1910, to fill unexpired term of Dr. J. L. Seibert (resigned); John Blanchard, Esq., appointed July 1912, for five years.

With the exception of Dr. Seibert who had formally resigned, it would appear that the persons legally qualified to organize a Board were: John Blanchard, Esq., Dr. R. G. H. Hayes, Dr. David Dale, and Dr. W. J. Locke. A meeting with these gentlemen and H. C. Quigley, Esq., was held on January 12th. The reasons for the inactivity of the Board seemed to be the failure of councils to adopt and to incorporate into an ordinance the codification of health rules and regulations devised and assembled by the Board. The latter believed it could not operate successfully unless the rules and regulations were adopted as enactments by councils. This body refused to expend the Borough money for necessary advertising, which, it was estimated, would amount to \$180.00.

The attention of the gentlemen was called to the language of the Acts of Assembly establishing the office of the State Commissioner

of Health, the Rules and Regulations promulgated by him, and the Act of May 14, 1909. They at once took steps to perfect an organization and to enforce all the usual measures.

It is to be noted that the public health had not been unduly endangered by reason of existing conditions. Through the efficient work of the Secretary and the Chief of Police, the usual quarantine had been established. The latter was employed by councils as Health Officer.

With the authority and by the request of the Secretary, your representative with the County Medical Inspector, made a study of local conditions. The principal work was in relation to smallpox. In addition to the case, mentioned above, one other case was diagnosed—a female, aged twenty-eight years, onset January 3rd. The almost coincident onsets in two persons of dissimilar social and other relations and the current rumors that other cases existed, made it advisable to investigate further.

The earliest case found was a male, aged thirty-five, in Axemann, Spring Township, onset December 25th, 1913. This patient had been in Niagara Falls, New York, until December 30th, when he proceeded directly to his present address. Smallpox had been epidemic in Niagara Falls for a full year.

This patient had been in contact with others on the date of arrival but it would obviously be impossible for him to have been the source of infection of cases occurring in Bellefonte on January 1st and 3rd.

There were frequent visitors between the rural sections of Centre County and Niagara Falls. Through such a channel may easily have come the infection of two cases of smallpox at the time just released from quarantine for "chickenpox" which were studied in Spring Township, the onsets being December 17th, 1913.

No other cases were discovered.

REPORT ON THE DIAGNOSIS OF CASES OF SMALLPOX IN HARRISBURG.

On February 20, 1914, in accordance with your instructions I proceeded to the premises of David C. Good, 1627 Market Street, Harrisburg, Danphin County, with Dr. J. M. Rannick, City Health Officer, in order to review the diagnosis of cases alleged to be smallpox.

The husband, David C. Good, supposed to have been infected in Altoona, developed the eruption of smallpox on February 1st and

was removed to the Sanitary Hospital on February 8th. The premises were placed under absolute quarantine on the same date.

On reinspection in order to release the premises at the end of parole quarantine period, Dr. A. Z. Ritzman, Medical Officer in charge of the Sanitary Hospital, established a diagnosis of smallpox in the case of Mrs. D. C. Good. This diagnosis was combatted by the attending physician, as it was alleged that she had been successfully vaccinated.

An investigation of all persons on the premises developed the following facts:—

Robert F. Good, a brother of David C. Good, aged twenty years, had been visiting in Barnesboro, Cherrytree and Cresson, and Spangler during the latter part of November and early part of December, 1913. He then returned to Altoona, the home of his sister-in-law on December 19th or 20th and found the premises under quarantine for smallpox. He resided with Walter McCreary at 8th Avenue and 19th Street, until the release of the premises of Joseph Good. He remained at the latter place until January 14th, developing an eruption about January 10th. On January 14th he proceeded to the home of David C. Good, in Harrisburg.

There is a history of a well defined rash, supposed at the time to be chicken pox, which appeared on Virginia, aged thirteen years, daughter of David C. Good, on or about December 15th, 1913. There had been intimate contact between the family of Joseph Good in Altoona and the family of David C. Good in Harrisburg. Virginia had been unsuccessfully vaccinated on February 9, following the diagnosis of smallpox in her father.

Mrs. David C. Good gave birth to a son on February 4th and an eruption appeared on February 7th. The eruption was not noted and she was vaccinated on February 9th, without success. She had been unsuccessfully vaccinated ten years previously. The cicatrix from this attempt found on the inner aspect of the left leg is probably the result of the trauma, not of a reaction. The prodromal symptoms of smallpox were confused with the symptoms of the puerperal state, and for that reason a diagnosis of smallpox was necessarily based on the eruption. The latter appeared first on the face, somewhat later on the hands and feet, its entire time of appearance covering thirty-six hours; the lesions were distributed on the face, scalp, and extremities, a few lesions appearing on the chest and the upper portion of the back. They were much greater in number at the distal points of all extremities and were found on the soles of both feet and the palms of both hands. The description of the eruption as given by the patient indicated that they were at first papular, becoming vesicular after twenty-four hours and then rapidly pustular.

It would seem from the time of contact with Robert Good, the evidence of unsuccessful vaccination, and the character and distribution of the skin lesions that the patient was suffering with mild smallpox.

The baby, David, Jr., born on February 4th, developed an eruption on February 8th. At the time of examination the lesions were in the pustular stage and were associated with a marked erythema particularly over the lower extremities. A diagnosis of smallpox was made in the cases of Robert F. Good, Mrs. David C. Good, and David Good, Jr., and a probable diagnosis of smallpox in the case of Virginia. This opinion was given to Dr. J. M. Raunick, City Health Officer.

The attending physician was indicted for negligence in not reporting the cases of Robert F. Good, Mrs. D. C. Good, and David C. Good, Jr., and for delay in reporting the case of David C. Good. A hearing was held on February 27th. Your representative was subpoenaed. By agreement, the case of Robert F. Good was dismissed. The physician pleaded guilty and was fined \$20.00 and costs in the case of David C. Good, and \$30.00 in each of the cases of Mrs. D. C. Good and David C. Good, Jr.

REPORT ON SMALLPOX IN ERIE COUNTY.

On the 12th of January, I was called to North East to investigate what was reported to be a suspicious eruptive disease in North East township, just outside the borough limits. The investigation showed a patient suffering from smallpox. I was informed by the parents of the child that, if my diagnosis was correct, there were a number of other persons ill with the same disease in the Borough of North East. On investigation, I found several cases of the malady within the borough limits, all of which were at once quarantined. I also discovered that a number of other persons who had been ill during the previous month, but had fully recovered, had suffered from a disease which was undoubtedly smallpox. As a result of this, the Board of Health of North East was informed as to the existing state of affairs and a systematic canvas of the town made with a view of ascertaining if any other persons were or had been afflicted with this ailment. Through this investigation, it was discovered that in a family by the name of Armink, residing in North East township, just beyond the borough limits, there had been entertained late in the autumn of 1913 a rela-

tive from the State of Washington, who was ill on his arrival in North East with what was supposed to be grippe. This was followed by a rash, which the attending physician called a "fruit rash," resulting from eating grapes which had been frost-bitten. Following this, all members of the family had a similar disease which gradually spread throughout the community.

Unfortunately, in connection with this outbreak, chicken pox was also epidemic in the community and there was a great deal of trouble in differentiating between the two diseases. It was also difficult to convince the people that both maladies were existent in the community. By the exercise of a little diplomacy and considerable brute force, the Boards of Education and Health were convinced, however, that they must comply with our regulations; unvaccinated children were excluded from the public schools; all suspicious cases were quarantined until a definite diagnosis was obtained; and, after one hundred and sixty-eight cases of smallpox had occurred within the borough limits, the disease was stamped out. As a result of the exposure before the disease was diagnosticated eighty-six cases of smallpox developed in North East township.

It is interesting to note in connection with this outbreak eight cases coming under my personal observation of children who had suffered from chicken pox during the fall of 1913, whose parents insisted that no smallpox existed but the two ailments were the same, and hence refused vaccination. Later these were attacked by the more severe disease.

While much passive resistance was met with in connection with quarantine and vaccination in this community, only one case of actual breaking of quarantine occurred; prosecution was instituted and a conviction obtained.

Twenty-seven cases of smallpox also appeared in Washington township during April and May. The source of infection in these cases was ascertained to have been brought into this community by a person living near the village of McLaue, who had contracted the disease while on a visit to one of the western states.

A systematic following up of all persons who had been exposed in any way, and the closing of one of the township schools, soon resulted in eradicating the disease from this neighborhood.

Twenty-two cases of smallpox occurred during the year in Venango township, the source of infection being an outbreak in the borough of Union City. The source of infection in that borough was traceable to the visit of the patient to Ripley, N. Y., where she contracted the disease through coming in contact with what was supposed to be a case of chicken pox. Through this medium a number of persons were exposed and thirty-six cases in all developed from this exposure.

Smallpox was also noted in Greenfield, McKean, and Waterford townships. Four cases also developed in a family in Elkereek township, the source of infection being relatives of the family who lived in Conneaut, Ohio.

An outbreak of this ailment also occurred in Springfield township, the source of which was traced to Cleveland, Ohio. It is needless to say that, in all instances, rigid quarantine was established and vaccination urged, with the result that no other cases appeared.

Twenty-six persons suffered from smallpox in the City of Erie during the year, five outbreaks from as many different sources occurring. Vaccination was ordered in the public schools and a number of vaccine physicians appointed. As the result of this effort, forty-three hundred school children were vaccinated, a very large percentage successfully. Much opposition was manifested, however, and an Anti-Vaccination movement organized, which later became permanent under the name of the "Erie Anti-Compulsory Vaccination Society." This organization has taken the case into court with a view of testing the vaccination law, and, at the present writing, no decision has been rendered.

There were also three cases of smallpox in the City of Corry, all occurring in one family, the source of infection being due to the visit of one of the members to friends in New York State. I may say that Erie County is an Anti-vaccination centre, and we have not only those who are opposed to vaccination in any form, but those who are opposed to compulsory vaccination. In addition we have those who object to vaccination as ordinarily applied and believe its administration internally to be the proper means of obtaining protection from smallpox. It is needless to say that the latter belong to the ultra-homeopathic school.

A REPORT OF AN EPIDEMIC OF SMALLPOX AT BILLMEYER, CONOY TOWNSHIP, LANCASTER COUNTY.

In compliance with instructions received through the Chief Medical Inspector, I proceeded on March 17th, to investigate an epidemic of smallpox at Billmeyer, Conoy Township, Lancaster County.

Billmeyer is a small village situated on the main line of the Pennsylvania Railroad where the Dolomite Quarry Company has its headquarters.

The company employs about three hundred men at these quarries, practically all of the employees being foreigners or negroes. They live at Billmeyer or at Bainbridge, a larger town on the Pennsylvania R. R., about a mile and a quarter north of Billmeyer.

Doctor J. L. Mowery, the County Medical Inspector, had established the diagnosis of smallpox. The investigation showed that the first case was that of a colored woman—Carrie Robinson—who is reported as having come to Bainbridge from Virginia a few days before the onset of the disease.

A summary of the cases is briefly as follows:—

Name.	Age.	Address.	Occupation.	Date of onset.
Carrie Robinson	30	Bainbridge	Housework	January 27
Betty Timblak	32	Bainbridge	Housework	February 18
Barret Timblak	35	Bainbridge	Laborer	February 20
John Dickerson	25	Bainbridge	Laborer	February 20
Alberta Timblak	4 mos.	Bainbridge		February 20
Mitchell Banka	41	Bainbridge	Laborer	February 20
Pearl Timblak	2	Bainbridge		February 21
Lillian Timblak	4	Bainbridge		February 21
Mrs. A. Woodard	30	Bainbridge	Housework	March 12
Allie Price	22	Billmeyer	Laborer	March 16
Ernest Hughes	26	Billmeyer	Laborer	March 1

With the hearty co-operation of the management of the Dolomite Quarry Company, and under the supervision of the County Medical Inspector—Doctor J. L. Mowery—it was arranged to do a wholesale vaccination of the employees at the Billmeyer Quarries.

By a happy coincidence it was pay-day and every employee was at the Quarries, but no man received his pay envelope until he submitted to vaccination. All employees, including the office force, or about three hundred and five persons were vaccinated.

REPORT OF INVESTIGATIONS IN JAMESTOWN ON ACCOUNT OF SMALLPOX.

In accordance with instructions I proceeded to Jamestown Borough, Mercer County, on November 28, in order to investigate the occurrence of an eruptive disease for which a definite diagnosis had not been made.

Jamestown is located on the Pittsburgh and Erie Division of the Pennsylvania lines west, ninety miles north by west of Pittsburgh;

and also on the Lake Shore and Michigan Southern Railway. By the latter, the residents have easy access to points in Ohio. The population in 1890 and 1910 was 822. No industrial or social factors have been introduced within five years which would lead to any notable change in population.

The local Board of Health is officered by Dr. C. H. Bailey, President, and D. W. Burnett, Secretary and Health Officer. The Board has been very inactive, not more than two meetings having been held during the past year. According to the statement of many residents there have been but few cases of communicable disease during the past several years.

The history of the present outbreak began with the onset of one Muriel Whaley, aged seventeen, whose home is in Conneaut, Ohio, and who visited Jamestown first on August 11. The Ohio State reports show that mild smallpox, frequently undiagnosed or diagnosed as chicken pox, has been continuously present in Ashtabula County, Ohio, since the early summer months of the present year, the larger number of cases occurring in the towns of Conneaut and Ashtabula.

There were rumored visits of other persons from this same county to Jamestown and vicinity but, during the course of the investigation, evidence of any other visitor with an eruptive disease was not obtained.

The onset of Muriel Whaley did not occur until thirty-five days after her arrival in Jamestown and the only evidence that she was the first case is that hers was the first discovered case with an eruptive disease and that she had been in indirect contact with her home in Conneaut, Ohio. In Jamestown she visited the home of an uncle, John Wier, the four members of which subsequently developed the disease. The onset of Mrs. C. H. Munger, a neighbor, was on September 19. This indicates that some other case was the common source of infection for both Miss Whaley and Mrs. Munger. No such case could be found at the time of my investigation, two and one half months after the onset of the earliest cases so diagnosed.

The data furnished by the local physicians and Dr. P. P. Fisher, County Medical Inspector for Mercer County, show that the significance of the eruption was not suspected until November 19. There are but two physicians in active practice in the Borough and the majority of persons found to have shown the eruption between the illness of the first and the twenty-first cases were not seen by either physician. Such persons as were seen by them were apparently not examined in detail and in the absence of a definite history of prodromata the diagnosis of impetigo contagiosa was made in several cases.

On November 19 a few sufficiently well developed cases were seen by the local physicians who called in consultation County Medical Inspector, Dr. P. P. Fisher. In his report, dated November 25, he

stated that he did not establish a diagnosis but in the same report gave a description of clinical features which are undoubtedly those of smallpox.

At the time of his visit the cases of the patients in two families were tentatively diagnosed as chicken pox and the premises were so quarantined.

The clinical history of twenty-one cases studied on December 3 and 4 by your representative was as follows:—abrupt onset with general headache and fever in all cases; anorexia, aching of the back and extremities; chilliness and sweating in varying combinations in the majority of the cases; the disappearance of all subjective symptoms within three to four days after the onset; the appearance of a papular eruption in *all* cases on the face and distal portions of the extremities within twelve to fourteen hours after recovery from subjective symptoms. The lesions rapidly passed through the morphological changes of the usual classical picture of smallpox, the time between the first appearance as a papule and the stage of encrustation averaging less than five days.

In addition to these features the history pertinent to the diagnosis was as follows:—

Onset.	Age.	Previous Vaccination.	Vaccination After Eruption.	Chicken Pox.	Vaccinated Contacts Escaping Disease.	Unvaccinated Contacts Acquiring Disease.	
Sept. 15	17	No	No	Yes	0	4	
	19	No	No	?	1	1	
30	10	No	Neg.	Yes	4	0	
Oct. 3	8	No	Neg.	Yes	2	2	
	5	8½	No	Neg.	Yes	0	4
	9	40	No	No	No	2	1
	10	2	No	No	No	1	1
	11	33	No	No	No	2	1
	11	35	At 15th yr.	No	No	1	1
	14	44	No	No	?	2	1
	19	40	No	No	?	0	4
	14	37	No	No	?	1	1
	19	40	No	No	Yes	0	4
	20	10	No	Neg.	Yes	2	2
24	35	Twice unsuc.	No	Yes	2	2	
28	50	Childhood	No	Yes	0	4	
29	32	No	No	Yes	3	1	
Nov. 7	4	No	Neg.	Yes	3	1	
	9	8	No	Neg.	Yes	4	0
	9	19	No	No	Yes	0	1
	16	22	No	No	Yes	0	1

The striking features are that twelve of the twenty-one cases were more than twenty years of age; that only two of the twenty-one had previously been successfully vaccinated; that no person vaccinated after recovery from the disease in question gave successful results; that thirteen gave distinct history of chicken pox infection during previous years; and four were uncertain but believed they had had chicken pox during childhood; and finally that all in-household con-

tact who had previously been successfully vaccinated escaped the disease while all unvaccinated contacts are included in the list of cases.

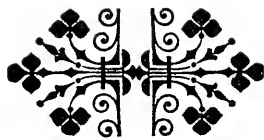
A diagnosis of smallpox based on these findings was established and this opinion given to the members of the Board of Health who assembled in special session on November 4th. The Board was not equipped with the necessary outfit to institute the proper quarantine and for that reason the placards on smallpox and the circulars on vaccination were furnished for distribution by the Department.

The history of contacts was obtained by Dr. C. H. Bailey, President of the Board of Health, who supplied the County Medical Inspectors in Crawford and Mercer Counties with a list, and who notified secretaries of Boards of Health in Boroughs to which cases were alleged to have gone while ill with the disease.

It was stated by Dr. M. A. Bailey of Jamestown, a member of the School Board, that the vaccination law had not been rigidly enforced for a period of six or seven years. By his request I met with him and one other member of the School Board to consider this question. Following the visit of County Medical Inspector Fisher, all school children had been vaccinated with the exception of two or three who were excluded from school. As these had been in contact with known cases of smallpox the premises occupied by them were placed under absolute quarantine for a period of eighteen days.

Certain patients were employees of the two railroads. The superintendents of the Divisions were notified by telephone, with subsequent confirmation by letter, advising them of the occurrence of the disease and advising immediate vaccination of all employees. This was at once and fully complied with.

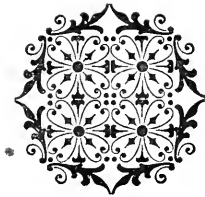
The County Medical Inspectors in Crawford and Mercer Counties were instructed by your representative to make special investigations in districts in which known cases were alleged to have visited and to make an inspection relative to vaccination in the township schools in their respective counties, immediately contiguous to the Borough of Jamestown. The report from Mercer County shows that of an enrollment of ninety-nine children in seven rural schools only twenty-four were vaccinated. The attention of the school teachers and directors was called to the necessity of enforcing the Act of Assembly.



DIVISION OF MEDICAL INSPECTION.

INSPECTION OF SCHOOLS AND SCHOOL CHILDREN MADE
DURING THE SCHOOL YEAR 1914-1915.

Inspection Practically Completed at the end of 1914.



SCHOOL MEDICAL INSPECTION.

School Medical Inspection has continued as during the last three years and it is very gratifying to note the change coming over the various communities where inspection has been carried out and to note the growth of the work as set forth in the following tables.

TABULATION SHOWING GROWTH OF SCHOOL MEDICAL INSPECTION IN THE FOURTH CLASS DISTRICTS OF PENNSYLVANIA.

School Year.	Districts Inspected.	School Buildings Inspected.	Pupils Inspected.
*1910	83	572	14,434
†1911-1912	757	3,572	145,499
1912-1913	1,469	7,375	265,372
1913-1914	1,831	8,969	377,099
1914-1915	2,159	11,036	469,199
			1,311,603

It will be seen that beginning with 145,499 pupils during the first inspection under the School Code the work has increased rapidly each year so that now practically 470,000 pupils are examined in a single inspection period; and during this interval of four years since the adoption of the School Code there has been a physical inspection of more than a million and a quarter school children. A few districts continue to deny children the benefit of school inspection, usually through a misunderstanding of the law or through some undue influence in the community.

It will be noted that this year 2,159 of the 2,377 Fourth Class School Districts accepted school inspection, that is, they did not pass resolutions informing the Commissioner of Health that they did not desire it. Not a district in the eight counties of Cameron, Clarion, Elk, Lackawanna, Montour, Union, Wayne, and Wyoming denied school children the privilege of medical inspection, and in each of the following twelve counties but a single district placed itself on record as being unprogressive and backward:—Bradford, Chester, Clinton, Delaware, Forest, Lawrence, Lycoming, McKean, Monroe, Pike, Potter, and Venango.

As in previous years the Department directed the Health Officers throughout the various counties to make a sanitary survey of such of the 218 Fourth Class School Districts as were located in Second Class Townships, and this year for the first time sent the County Medical Inspectors to make sanitary surveys in districts of the Fourth Class that included boroughs in the various counties. In this way

*Done experimentally by order of the Department of Health.

†Inspection (1911-1915) performed under the School Code in districts not exercising their option to vote against it.

sanitary inspection was extended to every district of the Fourth Class and medical inspection to a very much larger number of districts than has ever been reached in the history of the Commonwealth.

Not only is the table showing the various defects and the percentage of the more important defects one of considerable interest; but when certain of the important defects are placed in parallel columns for the purpose of bringing out the improvement that has occurred, the value of the work is made to appear in a very graphic way.

	1911-12	1912-13	1913-14	1914-15
Total number inspected,	145,499	305,372	377,079	469,199
Percentage of defective pupils,	76.7	74.9	72.7	71.5
Percentage of pupils having defective vision,	29.0	27.0	24.2	17.8
Percentage of pupils having defective hearing,	3.4	2.9	3.3	3.3
Percentage of pupils having defective nasal breathing,	10.8	3.4	5.7	4.9
Percentage of pupils having enlarged cervical glands,	8.7	6.9	5.9	4.9
Percentage of pupils having enlarged tonsils,	35.1	28.5	28.0	26.2

Perhaps a word of explanation may be required for the percentage of defects of vision—17.8 per cent. in 1914 as contrasted with 29 per cent. in 1911 and with 24.2 per cent. in 1913. There was undoubtedly some gradual reduction in the percentage of eye defects found; our figures each year are

1911,	29	per cent.	1913,	24.2	per cent.
1912,	27	per cent.	1914,	17.8	per cent.

and a good part of the reduction may perhaps be attributed to educational work both by the Department of Health and by the various ophthalmological societies throughout the Commonwealth. A small portion of this reduction, perhaps two or three per cent., may have been due to a slightly different method of classifying errors of vision adopted in tabulating results.

The extended statistics for the year 1914 covering 469,199 pupils are grouped by normals and defectives, by sex and by nativity, the table being arranged by counties. No material difference occurred in any one county as contrasted with other counties. The same tabulation of single defects and of single defects associated with other defects is carried out as in previous years; the total number of defectives at this time grouped in this table covers 335,427 pupils.

It is somewhat interesting to note that during the entire school year, for which we are reporting physical examinations in 469,199 pupils in the Fourth Class School Districts by Department Inspectors, in the city of New York a total of 305,665 pupils received such inspection. In other words, the Department Inspectors in Fourth Class School Districts examined over 160,000 more school children than were examined in America's greatest metropolis.

Letters to Parents. The work of forwarding notes to parents calling attention to defects found in their children by Department examiners was changed a little in order to comply with certain rulings of the post-office authorities. The letters in blank were sent to the teacher, and duplicate copies with the names of pupils and the defects, with the request that the teacher mail in stamped envelopes furnished for the purpose the various notes which she was instructed to make out. This method has not been quite as satisfactory as that used during the preceding year and it would seem as though it were better to do all the clerical work in the Department's offices and send the notes to the teachers to be forwarded through the pupil found to be defective, having this pupil hand the note to the parent or guardian. This would be in compliance with the postal regulations and relieve the teacher of considerable clerical work, and perhaps bring about a little closer cooperation.

Returns from Teachers. Notwithstanding the additional clerical work placed on the teacher by the change in methods a very much larger number of them returned records of pupils at the end of the season than in former years. Out of the 17,697 school rooms in the schools having complete medical inspection, with of course the same number of teachers, 13,863 sets of records were returned to us by that number of teachers at the end of the school year—in other words, seventy-eight per cent. of all the teachers of the Fourth Class Districts whose schools have been inspected are so actively interested in school medical inspection that they readily comply with our request to return records for the various pupils. The follow-up reports are of much interest in that they show twenty-two per cent. of the pupils reported as defective getting some sort of treatment and that ninety-five per cent. of pupils receiving treatment are reported by the teacher at the conclusion of the school year as being distinctly improved by treatment.

Letters are received from time to time from teachers volunteering information concerning certain of their pupils. The following note, appended to one of the return reports, is but one of many:

"Reed No. 12 School—Millcreek Township, Erie Co.

"The majority of children examined were benefited by it. The trouble and expense of the examination of the school was more than repaid in the benefit derived by one child, No. 64,730. She was positively *stupid* in her recitations and was failing in her grade.

"Upon the report of the Medical Inspector of our school she was operated on in our local hospital and notwithstanding her loss of time, she has completed with ease two year's work in less than one year's time; proving that a bright mentality can be fogged by special conditions that can be remedied and the helpfulness of this work.

"Sincerely,

"MRS. C. M. SHARP, Teacher."

SANTITARY INSPECTION.

Some change is noted from year to year in the sanitary conditions of the schools and yet as our ideas of school hygiene advance and as the school inspectors become more and more interested in the work our standards are set a little higher so that while the percentages of insanitary conditions as presented are high, had they been placed on the same basis as in previous years yet greater improvement would have been noted. Insanitary methods of sweeping seem to have been reduced from sixty to fifty-one per cent.; insanitary dusting from forty-three to thirty-two per cent.; insanitary water containers from thirty-seven to twenty-five per cent.; improper method of cleaning water containers from fifty to forty-four per cent. The common drinking cup remains in use in thirtyseven per cent. of the schools, and the common towel in thirty-eight per cent. of the schools. Insanitary conditions in connection with the various out-buildings have improved in a great many instances. The same custom has been followed of notifying school directors of each insanitary condition found by the school examiner and a complete copy of the sanitary survey for each room and building is sent to the School Board.

TABLE I. STATISTICS OF SCHOOL MEDICAL INSPECTIONS IN FOURTH CLASS DISTRICTS—SCHOOL YEAR, 1914-1915.

Inspection practically completed at the end of 1914.

Number of school buildings inspected,	11,036	
Number of schools inspected,	17,697	
Number pupils inspected,	469,199	
Number pupils defective,	335,427	71.5%
Number pupils not defective,	133,772	
Number having single defects,	184,900	
Number having multiple defects,	150,527	
*Total number of defects,	551,671	
Total pupils, treatment advised by letter,	304,619	90.8%

*Counting both defective eyes or both defective ears as two defects, the total number of defects reaches 618,133.

TABULATION OF DEFECTS.

*VISION.

Pupils having defective vision,	83,748	17.8%
Right eye,	13,184	
Left eye,	14,750	
Both eyes,	55,814	
Pupils having other eye affections,	5,512	
Corneal scars,	1,717	
Blepharitis,	1,400	
Conjunctivitis simplex,	1,237	
Conjunctivitis follicularis,	7	
Iritis,	1	
Trachoma,	4	
Strabismus,	1,091	
Astigmatism (special tests not made),	55	

HEARING.

Pupils having defective hearing,	15,600	3.3%
Right ear,	2,161	
Left ear,	2,791	
Both ears,	10,648	
Otorrhoea affecting hearing,	768	

BREATHING.

Pupils having defective breathing,	22,837	4.9%
Slight impairment,	15,009	
Serious impairment,	3,244	
Mouth breathing,	4,584	
Pupils having Adenoids (suspected),	6,713	
Pupils having Goitre,	879	

TEETH.

Pupils having defective teeth,	252,174	53.7%
Dirty teeth,	35,466	8.4%
Decayed teeth,	212,708	45.3%
Gums diseased,	1,377	

TONSILS.

Pupils having enlarged tonsils,	123,222	26.3%
Slightly enlarged,	78,260	16.7%
Greatly enlarged,	43,548	9.3%
Acutely inflamed tonsils,	1,414	

CERVICAL GLANDS.

Pupils having enlarged cervical glands,	22,874	4.9%
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TUBERCULOSIS.

Pupils reported as having tuberculosis,	789	
Tuberculosis of lungs,	264	
Tuberculosis of glands,	405	
Tuberculosis of bones,	57	
Tuberculosis of joints,	63	

NERVOUS DISEASES.

Pupils having nervous diseases of grave import,	755	
Chorea,	648	
Epilepsy,	107	

SKIN DISEASES.

Pupils having skin affections,	6,296	
Scabies,	57	
Impetigo Contagiosa,	293	
Favus,	5	
Ringworm,	46	
Head Lice,	4,878	
Body Lice,	4	
Lupus,	1	
Eczema,	366	
Acne,	345	
Other miscellaneous skin affections,	301	

DEFORMITIES.

Pupils reported as having deformities,	1,645	
Hunchback,	20	
Club-foot,	76	
Curved spine,	185	
Ankylosed joint,	31	
Harelip,	42	
Cleft palate,	140	
Miscellaneous deformities,	1,151	

MALNUTRITION.

Pupils with sub-normal nutrition,	8,578	
Slight,	7,544	
Marked,	1,034	

QUARANTINABLE DISEASES.

Pupils in school that should have been in quarantine,	56	
Chicken pox,	34	
Whooping cough,	22	

*Among the Vision defects was found one pupil blind in both eyes.

†Of the Hearing defects 18 pupils were deaf in both ears, 16 were both deaf and mute and 5 were mute.

TABLE II.
MEDICAL INSPECTION OF SCHOOL CHILDREN IN FOURTH CLASS DISTRICTS, 1914-1915, BY COUNTIES.

Area.	Normal.		Defective.		Normal.		Defective.		Normal.		Defective.	
	Total.	Total.	Total.	Total.	Male.	Female.	Male.	Female.	Native.	Foreign.	Native.	Foreign.
Total all counties,	469,199	133,772	335,427	64,135	69,637	169,685	165,742	127,447	6,325	318,484	16,943	
Adams,	4,290	1,197	3,093	534	663	1,481	1,522	1,196	1	3,001	2	
Allegheny,	23,972	6,367	17,605	3,146	3,231	9,060	8,545	5,896	471	16,438	1,167	
Armstrong,	10,728	3,100	7,628	1,503	1,597	3,835	3,793	2,788	312	6,854	774	
Beaver,	8,612	2,677	5,935	1,276	1,401	3,041	2,894	2,515	162	5,489	446	
Bedford,	6,735	1,815	4,919	817	999	2,450	2,469	1,772	44	4,889	30	
Berks,	13,374	3,670	9,704	1,811	1,859	4,961	4,743	3,653	17	9,646	58	
Blair,	5,113	1,604	3,514	761	843	1,750	1,764	1,565	39	3,439	75	
Bradford,	8,032	2,276	5,756	1,048	1,228	2,914	2,842	2,273	3	5,738	18	
Bucks,	9,395	3,292	6,103	1,592	1,700	3,090	3,013	3,246	46	5,990	113	
Butler,	7,609	2,239	5,370	1,101	1,138	2,717	2,653	2,166	73	5,198	177	
Cambridge,	18,003	4,279	13,723	2,095	2,175	6,839	6,894	3,899	371	12,064	1,669	
Cameron,	1,266	255	1,011	187	137	439	412	245	10	66	66	
Carbon,	6,306	2,051	4,255	1,020	1,031	2,131	2,074	1,838	193	3,988	267	
Centre,	6,720	1,724	4,996	822	923	2,061	2,061	1,633	41	4,355	141	
Chester,	11,660	4,529	7,131	2,193	2,336	3,605	3,626	4,433	91	6,971	100	
Clarion,	6,566	1,392	5,174	686	756	2,559	2,615	1,376	16	5,091	82	
Clearfield,	10,292	2,318	7,974	1,215	1,503	3,766	3,612	2,402	468	5,465	919	
Clinton,	4,007	1,417	2,590	671	746	1,353	1,362	1,061	15	2,465	25	
Columbia,	4,660	1,081	3,579	479	602	1,232	1,232	1,031	20	3,529	58	
Crawford,	6,530	1,587	4,943	744	848	2,568	2,583	1,580	7	4,918	25	
Cumberland,	6,075	2,683	3,392	1,276	1,407	1,684	1,708	2,673	10	3,384	8	
Dauphin,	7,697	2,689	5,008	1,177	1,103	2,439	2,328	2,249	31	4,787	30	
Delaware,	2,882	2,682	5,683	1,435	1,547	2,873	2,810	2,897	85	5,467	236	
Elk,	1,467	1,467	2,700	766	766	1,384	1,406	1,375	82	2,647	143	
Erle,	7,756	1,824	5,932	882	942	3,077	2,895	1,790	34	5,856	116	

Fayette,	9,084	2,140	6,944	1,083	1,057	3,512	3,432	1,502	338	6,128	816
Forest,	1,816	1,337	4,475	161	176	765	714	318	19	1,411	65
Franklin,	5,289	1,160	4,166	506	654	2,068	2,032	1,160	.....	4,166	.....
Culton,	1,316	1,200	1,200	63	57	116	634	1,269	.....	1,269	.....
Greene,	4,612	1,577	3,035	739	788	1,525	1,525	1,556	41	2,572	63
Huntingdon,	1,637	3,153	3,153	781	856	1,576	1,577	1,576	45	3,005	148
Indiana,	7,594	5,171	2,423	1,159	1,964	2,585	2,585	2,585	373	5,171	383
Jackson,	9,050	2,580	6,469	1,284	1,306	3,246	3,246	2,409	181	5,655	547
Jefferson,	2,152	2,780	1,372	360	1,370	664	708	1,370	.....	1,370	.....
Lackawanna,	5,085	1,367	4,668	650	717	2,362	2,362	1,240	127	4,067	631
Lancaster,	14,996	6,476	8,520	3,110	3,266	4,298	4,222	6,467	9	8,569	11
Lawrence,	5,765	1,288	4,477	656	623	2,253	2,194	1,665	222	4,289	238
Lebanon,	5,901	1,772	4,129	866	906	2,088	2,061	1,722	50	4,029	160
Lehigh,	1,349	1,441	1,441	563	756	2,465	2,465	1,340	.....	5,419	62
Luzerne,	13,481	2,679	10,802	1,224	1,445	5,574	5,228	2,501	178	10,092	710
Lycoming,	7,163	2,081	5,082	923	1,158	2,510	2,542	2,072	9	5,062	50
McKean,	5,122	2,011	3,111	887	1,024	1,599	1,512	1,977	34	3,058	29
Mercer,	6,899	1,482	5,416	665	818	2,758	2,658	1,445	37	5,187	229
Millin,	2,149	679	1,470	327	352	746	746	676	3	1,467	3
Monroe,	3,742	1,378	2,364	658	725	1,171	1,193	1,266	12	2,354	10
Montgomery,	11,470	2,977	8,493	1,430	1,547	4,347	4,146	2,875	102	8,148	345
Montour,	785	118	637	83	83	294	343	145	.....	637	.....
Northampton,	8,991	2,313	6,678	1,141	1,472	3,427	3,251	2,221	92	6,431	247
Northumberland,	4,411	1,274	3,137	603	671	1,591	1,546	1,263	11	3,103	34
Perry,	3,766	1,290	2,476	606	681	1,191	1,285	1,290	.....	2,473	3
Pike,	1,128	628	600	272	256	269	331	528	.....	599	1
Potter,	4,389	1,384	3,136	678	709	1,626	1,610	1,335	49	3,025	111
Schoykill,	16,022	3,616	12,406	1,390	1,825	6,379	6,077	3,516	100	11,721	685
Snyder,	2,294	484	1,720	217	1,483	862	838	484	.....	1,729	.....
Somerset,	10,474	2,765	7,709	1,332	1,435	3,838	3,871	2,438	217	6,953	786
Sullivan,	1,823	460	1,372	211	249	682	682	452	8	1,315	58
Susquehanna,	4,290	1,295	2,915	646	629	1,681	1,594	1,277	14	2,948	67
Tioga,	7,168	1,746	5,422	791	952	2,629	2,629	1,553	93	5,297	165
Union,	2,545	1,853	1,692	415	438	1,831	1,831	1,650	2	1,650	.....
Venango,	5,054	1,557	3,497	638	864	1,157	1,740	1,654	3	3,487	10
Warren,	3,826	1,170	2,656	554	616	1,249	1,407	1,158	12	2,643	13
Washington,	14,813	5,066	9,747	2,521	2,521	5,003	4,734	4,184	882	7,818	1,999
Wayne,	5,068	1,406	3,662	645	761	1,789	1,873	1,292	14	3,629	33
Westmoreland,	13,337	4,265	9,072	2,083	2,482	4,507	4,505	3,875	390	7,883	1,189
Westwood,	2,626	864	1,882	385	419	911	911	804	.....	1,825	.....
York,	13,466	2,470	10,996	1,229	1,241	5,781	5,245	2,463	7	10,985	11

TABLE IV. RESULTS OF SCHOOL MEDICAL INSPECTION IN FOURTH CLASS DISTRICTS. REPORTS RETURNED BY TEACHERS—SCHOOL YEAR, 1914-1915.

Total number of schools inspected,	17,697	
Total number of pupils inspected,	169,199	
Total number of pupils, treatment advised by teacher,	501,619	
Teachers returning reports at end of term,	13,833	78.3%
Pupils included in return reports,	242,542	
Pupils reported treated,	54,931	22.6%
Pupils reported not treated,	160,219	66.1%
Pupils, reported with no record of treatment,	27,215	11.2%
Pupils died during term,	107	
Pupils reported improved by treatment,	52,405	
Per cent. of treated pupils, improved,		95.4%
Pupils reported unimproved by treatment,	525	
Per cent. of treated pupils, unimproved,		0.9%
Pupils, results of treatment not stated by teacher,	2,011	
Per cent. of treated pupils, results not stated,		3.7%

DEFECTS TREATED.

	*Total.	Improved.	Unimproved.
Vision,	10,011	6,889	508
Hearing,	1,321	762	162
Breathing,	1,190	724	79
Teeth,	45,119	45,119	0
Tonsils,	6,844	4,373	298
Cervical glands,	1,133	655	40
Tuberculosis—Lungs,	89	37	17
—Glands,	92	54	14
—Bones,	6	0	3
—Joints,	20	7	1
Nervous Diseases,	168	88	34
Skin Diseases,	150	116	8
Deformities,	12	5	1
Malnutrition,	178	107	29
Miscellaneous Defects,	2,641	2,506	43

*In many cases results of treatment were not stated by teachers reporting, hence total of "Improved" and "Unimproved" does not equal total "Treated."

†That is 22.6 per cent of the pupils for whom returns are made in the reports of the teachers. It will be seen that for some \$9,000 of those for whom treatment was recommended we really have no information concerning the treatment or its outcome. If we had full reports the percentage of those treated probably would be at least as high as this.

TABLE V.

STATISTICS OF THE SANITARY INSPECTION OF SCHOOL BUILDINGS AND GROUNDS IN FOURTH CLASS DISTRICTS, SCHOOL YEAR 1914-1915.

Total Fourth Class School Districts in State,		Total. Per Ct.
Districts inspected by State Inspectors,	2,377	
By School Medical Inspectors,	2,134	2,353
By Health Officers or County Medical Inspectors, ...	219	
<i>SCHOOL OR CLASS ROOMS.</i>		
Total rooms inspected by State Inspectors,		19,892
By School Medical Inspectors,	17,823	
By Health Officers or County Medical Inspectors,	2,069	

Rooms having:		
Less than 15 sq. ft. floor surface per pupil,.....	1,416	7.1
Less than 200 cu. ft. air space per pupil,	2,728	13.7
Insanitary sweeping practised,	10,194	51.2
Dry dusting practised,	6,387	32.1
Light admitted from the front of seated pupils,	1,088	5.5
Light area less than 20% of floor surface,	8,368	42.1

SCHOOL BUILDINGS.

Total School Buildings inspected by State Inspectors,	12,525	
By School Medical Inspectors,	11,036	
By State Health Officers,	1,489	
Single room buildings inspected,.....	10,020	
Multiple room buildings inspected,	2,505	
Buildings sanitary in all particulars,	189	1.5
Buildings insanitary in one or more points,	12,336	98.5

Buildings having:

No adjustable seats or foot stools in use,	8,843	70.6
Ordinary stoves in use, unjacketed,	4,842	38.6
Modern single room ventilating heaters in use,	2,705	21.6
No thermometer in use,	4,677	37.3
No provision to keep warm air moist,	7,996	63.8
No fresh air inlets at stove or furnace,	8,485	67.8
Fresh air inlets subject to contamination,	332	2.6
Mechanical (fan) system of ventilation in use,	146	1.2
Windows the only means of ventilation,	9,315	74.4
Not open during session,	903	7.2
Ventilation boards or shields not in use,	7,033	56.1

BUILDINGS OF MORE THAN ONE STORY.

Exit doors do not open outward,	214
No iron fire escapes provided,	1,371

WATER SUPPLY, ETC.

Unsafe,	1,015	8.1
Menaced by surface drainage,	928	
Menaced by privy vault, cesspool, or manure seepage,	261	
Insanitary water container in use,	3,140	25.1
Container not properly cleaned and refilled,	5,587	44.6
Public or municipal water supply in use,	1,198	9.6
Sanitary drinking fountain in use,	1,162	9.3
Common drinking cup still in use,	4,664	37.2
Common towel in use,	4,814	38.4

PLAY GROUNDS.

Insanitary,	1,568	12.5
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PRIVIES.

Separate accommodations not provided for each sex,	64	0.5
Entrances not legally screened,	5,803	46.3
Privies unclean,	2,816	22.5
Base not tightly closed,	6,409	51.2
Insanitary vaults,	9,000	71.8
Vaults full,	3,855	30.8
Lime or other disinfectant not used,	6,152	49.1

FLUSH CLOSETS.

Modern flush closets in use,	601
Flush closets unclean,	10
Flush closets improperly trapped and vented,	81

The following two hundred and nineteen Fourth Class School Districts exercised their option under Section 1503 of the School Code not to have Medical Inspection of Schools.

ADAMS COUNTY. Townships: Germany, Latimore, Reading, Straban, Tyroue.

ALLEGHENY COUNTY. Boroughs: Crafton, Sewickley, Thornburg, Wall, West Homestead, Whitaker. Townships: McCandless, Moon, Mt. Lebanon.

ARMSTRONG COUNTY. *Borough:* Applewold. *Townships:* Boggs, Burrell, Mahoning, Parks, Perry, Plumcreek, South Buffalo, Sugar Creek.

BEAVER COUNTY. *Townships:* Ohio, Raccoon.

BEDFORD COUNTY. *Boroughs:* Coaldale, New Enterprise Ind. *Township:* Juniata.

BERKS COUNTY. *Townships:* Albany, Colebrookdale, Earl, Heidelberg, Jefferson, Marion, North Heidelberg, Washington.

BLAIR COUNTY. *Borough:* Roaring Spring. *Townships:* Catharine, North Woodbury, Taylor.

BRADFORD COUNTY. *Township:* Granville.

BUCKS COUNTY. *Borough:* Trumbauersville. *Townships:* Falls, Hilltown, Richland.

BUTLER COUNTY. *Borough:* Harmony. *Townships:* Adams, Clinton, Venango.

CAMBRIA COUNTY. *Boroughs:* Ashville, Ebensburg, South Fork. *Township:* Allegheny.

CARBON COUNTY. *Borough:* Weatherly. *Township:* East Penn.

CENTRE COUNTY. *Borough:* Howard. *Townships:* Gregg, Howard, Liberty, Potter, Union.

CHESTER COUNTY. *Township:* South Coventry.

CLEARFIELD COUNTY. *Boroughs:* Burnside, Troutville. *Townships:* Boggs, Brady, Covington, Girard, Goshen, Morris, Union.

CLINTON COUNTY. *Borough:* Beech Creek.

COLUMBIA COUNTY. *Townships:* Cleveland, Jackson, Mt. Pleasant, Orange.

CRAWFORD COUNTY. *Borough:* Springboro. *Townships:* Bloomfield, Greenwood, Pine.

CUMBERLAND COUNTY. *Townships:* Frankford, North Middleton, Newton, South Middleton, Upper Allen.

DAUPHIN COUNTY. *Townships:* East Hanover, Rush.

DELAWARE COUNTY. *Township:* Bethel.

ERIE COUNTY. *Borough:* Middleboro, Pleasant Hill Ind.

FAYETTE COUNTY. *Borough:* Point Marion. *Townships:* Brownsville, Franklin, Nicholson, Springhill.

FOREST COUNTY. *Township:* Tionesta.

FRANKLIN COUNTY. *Townships:* Antrim, Greene, Quincy.

FULTON COUNTY. *Townships:* Belfast, Licking Creek.

GREENE COUNTY. *Townships:* Franklin, Jackson, Springhill.

HUNTINGDON COUNTY. *Townships:* Clay, Cromwell, Hopewell, Lincoln, Penn, Smithfield, Walker.

INDIANA COUNTY. *Boroughs:* Mechanicsburg, Shelocta. *Townships:* Banks, Canoe, Centre, Rayne.

JEFFERSON COUNTY. *Borough:* Worthville. *Townships:* Beaver, Henderson, Knox.

JUNIATA COUNTY. *Townships:* Lack, Spruce Hill, Tuscarora.

LANCASTER COUNTY. *Boroughs:* Akron, Marietta, Mt. Joy, New Milltown Ind., Strasburg, Terre Hill. *Townships:* Brecknock, Colerain, Ephrata, Little Britain, Manheim, Paradise.

LAWRENCE COUNTY. Chewton Ind.

LEBANON COUNTY. *Townships:* Bethel, East Hanover, Swatara, West Cornwall.

LEHIGH COUNTY. *Boroughs:* Coplay, South Allentown.

- LUZERNE COUNTY.* Borough: West Wyoming. Township: Slocum.
- LYCOMING COUNTY.* Township: Woodward.
- McKEAN COUNTY.* Township: Liberty.
- MERCER COUNTY.* Townships: Greene, Hickory, Jackson, Mill Creek, Pymatuning, Sandy Creek.
- MIFFLIN COUNTY.* Borough: Burnham. Township: Union.
- MONROE COUNTY.* Township: Polk.
- MONTGOMERY COUNTY.* Borough: East Greenville. Townships: Douglass, Franconia, Limerick, Montgomery, Upper Merion, Upper Pottsgrove.
- NORTHAMPTON COUNTY.* Townships: Upper Mt. Bethel, Williams.
- NORTHUMBERLAND COUNTY.* Townships: Delaware, Jordan, Little Mahanoy, Rockefeller, Upper Mahanoy, Washington.
- PERRY COUNTY.* Borough: Landisburg. Townships: Northeast Madison, Pleasant Valley.
- PIKE COUNTY.* Township: Delaware.
- SCHUYLKILL COUNTY.* Boroughs: Cressona, New Ringgold. Township: Walker.
- SNYDER COUNTY.* Townships: Perry, Spring, West Beaver.
- SOMERSET COUNTY.* Borough: Wellersburg. Townships: Addison, Elk Lick, Lower Turkeyfoot.
- SULLIVAN COUNTY.* Townships: Elkland, Forks, Laporte.
- SUSQUEHANNA COUNTY.* Townships: Brooklyn, Clifford, Franklin, New Milford.
- TIOGA COUNTY.* Borough: Lawrenceville. Township: Clymer.
- VENANGO COUNTY.* Borough: Rouseville.
- WARREN COUNTY.* Townships: Farmington, Freehold, Sheffield.
- WASHINGTON COUNTY.* Boroughs: Cross Roads Ind., Deemston, Finleyville, North Charleroi, Twilight, West Alexander, West Middletown. Townships: Buffalo, Canton, Chartiers, Donegal, Hopewell, Jefferson, Union, West Finley.
- WESTMORELAND COUNTY.* Boroughs: Arnold, Vandergriff.
- YORK COUNTY.* Boroughs: Spring Grove, Wrightsville. Townships: Warrington, York.

MEDICAL INSPECTION OF SCHOOLS IN THIRD CLASS SCHOOL DISTRICTS.

The Department was informed that a medical inspection of pupils was made in certain Third Class School Districts in which the board of school directors had not voted against inspection, as the School Code provides. The fifty-six districts of this class thus inspected were as follows:

ALLEGHENY COUNTY: Bellevue, Braddock, Carnegie, Etna, Knoxville, Munnhall, North Braddock, Penn Township, Tarentum. *BLAIR COUNTY:* Juniata, Tyrone. *BUCKS COUNTY:* Bristol. *CHESTER COUNTY:* Coatesville, Phoenixville, West Chester. *CLINTON COUNTY:* Lock Haven. *COLUMBIA COUNTY:* West Berwick. *CUMBERLAND COUNTY:* Carlisle. *DAUPHIN COUNTY:* Susquehanna Township. *DELAWARE COUNTY:* Darby, Radnor Township. *ELK*

COUNTY: Ridgway, St. Marys. *FAYETTE COUNTY*: North Union Township. *INDIANA COUNTY*: Indiana. *LACKAWANNA COUNTY*: Dickson City, Old Forge, Clyphant, Throop. *LANCASTER COUNTY*: Columbia. *LEBANON COUNTY*: Lebanon. *LEHIGH COUNTY*: Catasauqua. *LUZERNE COUNTY*: Nanticoke, Newport Township, Swoyersville, Wilkes Barre, Kingston. *MONTGOMERY COUNTY*: Abington Township, Cheltenham Township, Conshohocken, Lower Merion Township, Norristown. *NORTHAMPTON COUNTY*: Bethlehem, Northampton. *NORTHUMBERLAND COUNTY*: Coal Township, Milton, Mt. Carmel Township, Shamokin. *SCHUYLKILL COUNTY*: Mahanoy City, Mahanoy Township, Shenandoah. *VENANGO COUNTY*: Franklin. *WARREN COUNTY*: Warren. *WESTMORELAND COUNTY*: Jeannette, Monessen, Scottdale.

The board of school directors of each of these districts was asked to report the results of the inspection on blank forms provided by the Department in order that a comparison might be made of the defects found in the two groups of school districts. The returns made this year in compliance with this request are not sufficiently explicit to permit a complete tabulation or any extended comparison.

We have returns from twenty-one counties. The number of pupils reported as inspected is 48,787. Of the pupils thus medically inspected 15,235 are noted as normal and 33,552 as defective in the sense used in these examinations. The defectives of the Third Class School Districts form sixty-eight and eight-tenths per cent. of the pupils examined, or nearly three less than the percentage which obtained in the Fourth Class Districts in which approximately ten times as many pupils were inspected. In the two classes of Districts the proportion of defectives by sex varies only one-half of one per cent., but there is a striking difference in relation to nativity. In the Fourth Class School Districts 16,943 defectives, or five per cent., are entered as "foreign" while the 2,492 in the group of figures for the Third Class Districts make up seven and four-tenths per cent. of all the defectives. This is probably due to some peculiar distribution of the population with reference to the schools in question.

A classification of the normal and defective pupils by sex and nativity in the Third Class School Districts for each of these twenty-one counties follows:—

TABULATION AS NORMAL AND DEFECTIVE, BY SEX, NATIVITY, AND BY COUNTY, OF 48,787 CHILDREN INSPECTED IN THIRD CLASS SCHOOL DISTRICTS.

Area	Total	Normal		Defective		Normal		Defective			
		Total	Male	Female	Total	Male	Female	Native	Foreign	Native	Foreign
Total	48,787	15,285	7,690	7,545	17,158	16,894	14,264	971	31,060	2,492	
Allegheny	8,856	2,612	1,305	1,306	3,211	3,032	2,204	309	5,691	652	
Blair	1,132	391	167	224	302	319	337	7	734	7	
Bucks	1,054	383	167	216	301	310	348	35	605	66	
Chester	3,437	1,404	713	691	1,013	1,020	1,354	50	2,001	32	
Clinton	1,133	215	105	110	481	437	215	0	912	6	
Columbia	1,098	185	63	66	473	490	101	34	691	272	
Dauphin	1,140	140	88	72	178	129	160	0	307	0	
Delaware	2,793	1,277	706	671	702	714	1,301	76	1,306	110	
Elk	1,708	370	144	226	259	209	219	53	411	27	
Fayette	2,221	450	232	218	985	826	384	66	1,351	414	
Indiana	905	285	165	120	313	277	279	6	610	10	
Lancaster	1,427	1,427	693	734	2,176	1,872	1,311	116	3,438	610	
Lancaster	5,475	4,048	147	148	224	243	288	7	461	6	
Lebanon	762	205	105	100	224	224	288	7	819	6	
Lebanon	919	58	24	34	447	414	51	42	819	37	
Montgomery	3,430	1,207	608	599	1,139	1,074	1,188	19	2,176	37	
Northampton	1,185	573	288	285	321	291	422	151	437	175	
Northumberland	5,283	1,065	513	482	2,175	2,103	1,000	5	4,289	39	
Scranton	2,375	1,369	718	651	996	1,210	1,858	11	2,172	34	
Snyder	1,483	546	279	267	461	476	546	0	995	2	
Warren	1,713	733	409	374	461	469	765	18	915	15	
Westmoreland	1,168	289	143	146	440	439	283	6	843	36	

FEEBLE-MINDED AND EPILEPTICS.

A new departure was made in the Inspection of Schools in the Fourth Class Districts by making provisions for School Medical Inspectors and Health Officers to collect information concerning feeble-minded children and epileptics not under public care in Institutions. Instructions were issued to each of the School Medical Inspectors in compliance with modern classification setting forth the usual understanding of morons, imbeciles, and idiots, together with a record form upon which to give the number of those who could distinctly be grouped in each class. This circular of instructions and the blank form designed follow, as well as a tabulation of the various groups of children found by these inspectors in their assigned work. It will be noted that the inspectors collected information concerning 1,098 feeble-minded persons, 674 of whom are believed to be morons, and that 345 epileptics were reported, 172 of whom have convulsions very frequently.

LETTER OF INSTRUCTIONS CONCERNING A CENSUS OF THE FEEBLE-MINDED AND EPILEPTIC IN THE FOURTH CLASS SCHOOL DISTRICTS.

Harrisburg,
September 1, 1914.

Dear Doctor:—

We are anxious to ascertain the number of epileptics and mentally defective persons who may reside in the fourth class school districts of the Commonwealth and who are not now under public care in institutions.

With this end in view the accompanying record sheet is being sent to all School Medical Inspectors and Health Officers with directions to forward thereon all obtainable information concerning adults and children so afflicted who reside in the districts where medical or sanitary inspections of schools will be made.

There is great lack of reliable information in regard to the number of feeble-minded and epileptics, and every effort which you expend in helping to obtain reliable data in reference to those so unfortunately afflicted will aid in planning for their care.

Teachers will undoubtedly know of all feeble-minded or epileptics who have at any time been registered as pupils and will also know of adults and children so afflicted residing in the homes of the patrons of the schools. The information will only be used for statistical purposes. By interviewing the teachers sufficiently accurate information may be secured for this purpose.

For your guidance the following brief descriptions of mentally defectives and epileptics are given:—

Feeble-Minded.

The mentally defective or feeble-minded may be divided into three classes according to the degree of mental deficiency—idiots, imbeciles and morons.

Idiots:—An idiot is a person so defective in mind from birth, or from an early age, that he is unable to guard himself from common physical dangers.

Imbeciles:—An imbecile is one who by reason of mental defect existing from birth, or an early age, is incapable of earning his living, but is capable of guarding himself against common physical dangers.

Morons:—A moron is one who is capable of earning a living under favorable circumstances, but, who, owing to mental defect from birth or from early age, is not capable of competing on equal terms with his normal associates, or of managing himself or his property with ordinary prudence.

With good environment suited to their mental capacity morons may become entirely self-supporting. Some morons may be handled in the public schools, others are best taught in special day schools, but the vast majority do very much better with institution care.

The feeble-minded girl of child bearing age, to whom so much attention is now being directed by social workers and charity organizations, is usually of the moron class. Backward children at school may be either imbeciles or morons; but they also may be suffering from some physical conditions, such as deafness, optical defects or adenoids. In some cases, the arrest of mental development may not be permanent, and such children, when placed under better conditions, in one of our training schools, or even in a special class for backward children at the public school, may recover mental power to a sufficient extent to develop into self-supporting and useful members of society. These cases, however, are of comparatively rare occurrence, and in the overwhelming majority of instances the arrest of development is permanent, and the child-type of mind continues through the remainder of life.

Epileptics.

Epileptics are persons who are subject to periodic sudden lapses of consciousness usually associated with convulsions ("fits"). The unconsciousness is often preceded by a peculiar local sensation beginning in the fingers or toes, gradually extending until the whole body is involved and the patient falls with or without a scream, convulsion and unconsciousness rapidly developing.

If you can learn of any feeble-minded or epileptic persons through your interviews with the school teachers, you are respectively requested to give all the data you can acquire concerning them on the record sheets furnished for the purpose, a separate sheet for each township or borough, appending your name and address prior to forwarding it when you have concluded your inspections.

Yours very truly,

SAMUEL G. DIXON.

In accordance with these instructions the School Medical Inspector or Health Officer gathers such information as he can and turns it in on Form 97, of which a copy is appended.

**SUMMARY OF REPORTS ON THE FEEBLE-MINDED AND EPILEPTICS
NOT IN PUBLIC INSTITUTIONS IN THE FOURTH-CLASS SCHOOL DIS-
TRICTS OF PENNSYLVANIA IN 1914.**

THE FEEBLE-MINDED AND EPILEPTICS FOUND IN THIS INSPECTION.

	Males.	Females.	Total.
Reported by medical inspectors,	806	501	
Reported by health officers,*	70	46	
Insufficiently classified;			26
			<hr/> 1,443
	White.	Colored.	
Reported by medical inspectors,	1,285	16	
Reported by health officers,*	116	0	
Insufficiently classified,			26
			<hr/> 1,443

FEEBLE-MINDED, BY TYPES.

Morons,	674
Imbeciles,	304
Idiots,	120
	<hr/> 1,098

EPILEPTICS.

(Arranged according to frequency of convulsions.)

Number having convulsions rarely,	132
Number having convulsions frequently,	172
Number having convulsions daily,	15
Insufficiently classified,	26
	<hr/> 345

**AN ANALYSIS OF THE FEEBLE-MINDED AND EPILEPTICS ATTENDING
SCHOOL.**

Males,	418
Females,	221
Insufficiently classified epileptics,	26
	<hr/> 665
Whites,	631
Colored,	8
Insufficiently classified epileptics,	26
	<hr/> 665

NUMBER OF FEEBLE-MINDED ATTENDING SCHOOL.

Morons,	408
Imbeciles,	119
Idiots,	36
	<hr/> 558

NUMBER OF EPILEPTICS ATTENDING SCHOOL.

(Arranged according to frequency of convulsions.)

Number having convulsions rarely,	41
Number having convulsions frequently,	33
Number having convulsions daily,	2
Insufficiently classified,	26
	<hr/> 107

**TABULATION OF THE FEEBLE-MINDED AND EPILEPTICS ACCORDING
TO AGE PERIODS.**

Under 6 years,	21	13 years,	77
6 years,	58	14 years,	77
7 years,	69	15 years,	46
8 years,	91	16 years,	63
9 years,	94	Over 16 years,	568
10 years,	93	Insufficiently classified epileptics,	26
11 years,	75		
12 years,	90		
			<hr/> 1,442

*Health Officers reported in districts which did not have medical inspection.

DIVISION OF MEDICAL INSPECTION.

ABSTRACTS OF REPORTS MADE
BY THE
COUNTY MEDICAL INSPECTORS.
1914.



ABSTRACTS FROM THE REPORTS OF THE COUNTY MEDICAL INSPECTORS CONCERNING INVESTIGATIONS OF ALLEGED CASES OF COMMUNICABLE DISEASES DURING THE YEAR 1914.

ADAMS COUNTY.

Dr. John R. Dickson, C. M. I. I hereby submit a brief summary of work done for the State Department of Health in Adams County for the year 1914. From the following table it will appear that much less disease existed in our territory than in other recent years.

We have nine Health Officers in the County, who are generally active and efficient, each having at least one Township under his jurisdiction, one having four.

Health Officer. Townships.	Typhoid fever.	Diphtheria.	Chicken pox.	Whooping cough.	Tuberculosis.	Pneumonia.	Scarlet fever.	Mumps.	Measles.	Erysipelas.	Total.
D. C. Krise, District 155: Cone- wago.	1	3	1	.....	1	.....	.....	.....	.....	.....	6
J. C. Bell, District 157: Cum- berland, Straban.	2	.....	1	4	.....	.....	.....	.....	1	.....	8
H. V. Rahn, District 154: Ber- wick, Oxford, Mt. Pleasant.	10	3	.....	25	.....	.....	.....	.....	.....	1	39
J. J. Kohl, District 150: Frank- lin.	1	.....	.....	5	6	1	.....	.....	.....	.....	13
Chas. Adelsperger, .. District 151: Munal- len.	2	3	.....	.....	1	5	.....	1	.....	.....	12
J. H. Pecher, District 158: High- land, Freedom, Liberty, Hamilton- ban.	1	2	.....	8	2	.....	.....	1	1	.....	15
J. H. Delp, District 152: Ty- rone, Latimer, Huntingdon.	2	.....	1	.....	.....	.....	1	.....	.....	.....	4
S. O. Goucher, District 156: Union, Germany, Mt. Joy.	2	2	2	.....	.....	.....	.....	.....	.....	.....	6
Daniel Mummert, District 912: Read- ing, Hamilton.	8	2	1	.....	1	.....	.....	.....	.....	.....	12
Total,	29	15	6	42	11	6	1	2	2	1	115

Our chief attention is given to typhoid fever, and particularly to the prevention of its spread through the medium of dairy and other food products. We have considerable trouble to get prompt diagnoses and prompt reports from physicians. The long period elapsing between the initial malaise and the plainly developed disease gives much chance for its conveyance by water, food, and flies prior to the use of such precautions as are advised by the State.

Diphtheria and scarlet fever are quite generally reported promptly by the physicians, all precautions taken, and advice followed. Fortunately there has been but little of either disease to handle this year. Whooping cough occasions very little disturbance, beyond the necessary fumigation on recovery which is not popular. Seventeen cases of pneumonia and tuberculosis combined is a large total for pulmonary disease, compared with totals for other communicable diseases, and fifteen of these, six of pneumonia and nine of tuberculosis, have been in the higher altitudes and mountain districts of the county. Nearly two-thirds of all cases of typhoid fever have existed in the two districts, 154 and 912, which embrace New Oxford Borough, Oxford Township, and the territory drained by the Conewago Creek and its tributaries, a creek which practically sewers Hanover, New Oxford and East Berlin.

In Reading Township a farm was discovered which had evidently been the source of infection of about six cases of typhoid fever, the discovery being made in an investigation following a report made by Doctor Edgar Miller of a case of typhoid fever which came into his hands from the practice of another physician who had removed from the locality, and which had not been reported to the Health Officer. On my visit to that infected house I learned that in a period of four months these six cases had worked on or about this farm, and were not reported by the physician. No member of the family contracted the disease who had lived on the farm. The premises were clean and well and neatly kept. A bacteriological examination of the water in the well showed six *B. coli* in one cubic centimeter. This suggested the value of water examination in connection with the scrubbing brush.

Thirteen dairy farms were stopped from selling milk or butter on account of typhoid fever, and five on account of diphtheria.

Forms 36 received,	119
Forms 37 received,	103

ALLEGHENY COUNTY.

Dr. S. M. Rinehart, C. M. I. On March 17th, I made an investigation of a reported scarlet fever epidemic in Wilksburg Borough. Charges had been made that many cases existed and that the local Board of Health had failed to take even ordinary precautions to prevent the spread of the disease, the schools being infested with it, scholars being allowed to attend although under suspicion.

I found that thirty-five cases had been reported in January and twenty-four cases in February and during March, up to and including the 16th, sixty-four cases. Nine of the latter were secondary to others in the same household.

Although the number of scarlet fever cases was large, I did not find it greater in proportion to the number of residents than had occurred in other communities throughout the county. The spread of scarlet fever was no doubt at least in part due to the Sunday revival meetings which were held in Pittsburgh in January. People from all over the county assembled in the Tabernacle, and distribution of communicable diseases was wide-spread.

After going over the conditions I found nothing to criticize in the work of the Wilksburg Board of Health. The epidemic subsided very shortly after my visit of the 17th.

Scarlet Fever:—A complaint concerning scarlet fever in Fair Oaks, Leet Township, was found to be without basis in fact. I had Health Officer J. H. D. Gray visit Fair Oaks and make an investigation. Quarantine had been observed as rigidly as the law required.

With the exception of the above, I made no special investigations during the year, the rest of my work having been confined to giving advice and instruction concerning local conditions to those who came to my office. The general health in the county has been good, as is well attested by the reduction in the number of reports of communicable diseases. In 1913 this office received 1,595 reports and 1914, 765.

General Summary of County Medical Inspection for Year 1914.

Forms 36 received,	765		
Forms 37 received,	625		
Examined cases alleged to be:—		Examined cases found to be	
Smallpox,	0	Smallpox,	0
Typhoid fever,	0	Typhoid fever,	0
Diphtheria,	0	Diphtheria,	0
Scarlet fever,	0	Scarlet fever,	0
Chicken pox,	0	Chicken pox,	0
Measles,	0	Measles,	0
Mumps,	0	Mumps,	0
Tetanus (By Dr. Koenig),	1	Tetany (By Dr. Koenig),	1

Health officers instructed,	15
Investigations of epidemics in boroughs,	1
Investigations of drainage complaints,	1
Investigations of complaints of unsanitary conditions,	8

ARMSTRONG COUNTY.

Dr. T. N. McKee, C. M. I. I beg to submit the following summary of the activities of your Medical Inspector for Armstrong County for the year ending December 31st. 1914. As detailed reports of all work done have been sent to your Chief Medical Inspector from time to time during the year, and in order to make this report as brief as possible, it will be confined to statistics tabulated from the records of the office with such comment thereon as seems necessary in the way of explanation or comparison.

There has been no change in municipal lines during the year, and little, if any, in the township population. The population given the several townships in a table to be found later in this report is taken from the census of 1910, and gives a total of 40,371, but industrial development, particularly in Brady's Bend, Cowanshannock, East Franklin, Madison, Mahoning, North Buffalo, Red Bank, and Wayne Townships, since that time has brought it up to probably 45,000.

During the year 900 persons, alleged to be suffering from communicable diseases, were examined for the purpose of establishing the diagnosis. This is a decrease of 252, or 21.9% from last year.

In order to check outbreaks of scarlet fever, it was necessary to close ten schools and have the rooms fumigated. Six of these were in one building. The same procedure was necessary on account of diphtheria in five instances, measles six, and chicken pox two, making a total of twenty-three schools distributed in twelve townships. I am glad to be able to report that the school boards of the county are awakening to a realization of the importance of school room disinfection, and are not so prone to look upon it as an entirely useless proceeding and waste of public funds. Some of the boards have even come to the point of keeping a stock of chemicals on hand and not infrequently fumigate rooms under their care without notice from health officials.

Eight dairy farms were inspected on account of outbreaks of typhoid fever, five for scarlet fever and one for diphtheria. The stock was transferred from three of these farms, and the sale of milk and milk products was temporarily discontinued from the eleven other premises.

Inspections were made at various times in nineteen of the twenty-seven townships, and under special instructions from your office, Parker City, and Kittanning and Ford City Boroughs, were visited for the same purpose. This, with other business of the office, necessitated traveling 1,223 miles by rail and 812 by livery.

The eleven district Health Officers sent in 807 reports of placarding (Form 36) and 704 reports of disinfection (Form 37), making a total of 1,511 reports received, copied and forwarded to the Department. There was a decrease of 356, or 31.5%, from last year in the number of communicable diseases reported. By a study of the following tables you will observe that they came from every township in the county; it will also be noted that but twelve of the thirty-five diseases, which the laws of the Commonwealth require physicians to report to the health officials, were brought to the attention of this office.

Table Showing Township population and Distribution of Communicable Diseases.

Township,	Population.	Chicken pox.	Diphtheria.	Erysipelas.	Impetigo contagiosa.	Measles.	Mumps.	Pneumonia.	Scarlet fever.	Scarlet fever.	Tuberculosis.	Typhoid fever.	Whooping cough.	Total.
Bethel,	952	3	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
Boggs,	878	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Bradys Bend,	12,696	14	63	.....	.....	80	.....	.....	.....	.....	.....	.....	.....	134
Burrell,	833	.....	.....	1	.....	50	.....	.....	.....	.....	.....	.....	.....	57
Covanshamock,	4,128	8	10	.....	.....	9	8	.....	.....	.....	.....	.....	.....	54
East Franklin,	1,850	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	61
Gilpin,	19,334	.....	33	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	123
Hovey,	267	.....	1	.....	.....	10	.....	.....	.....	.....	.....	.....	.....	11
Kiskiminetz,	2,845	12	113	.....	.....	15	.....	.....	.....	.....	.....	.....	.....	48
Kittanning,	1,103	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
Madison,	2,318	.....	1	.....	.....	10	.....	.....	.....	.....	.....	.....	.....	31
Mahoning,	1,725	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	10
Manor,	3,195	.....	13	.....	.....	1	1	.....	.....	.....	.....	.....	.....	61
North Buffalo,	1,120	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Parks,	963	14	3	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	35
Perry,	595	44	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	49
Pine,	807	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9
Plumereek,	1,534	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	5
Rayburn,	1,384	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18
Red Bank,	2,079	.....	7	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	30
South Bend,	598	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
South Buffalo,	1,378	1	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17
Sugarareek,	790	.....	.....	.....	.....	15	.....	.....	.....	.....	.....	.....	.....	21
Valley,	452	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
Washington,	1,135	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Wayne,	1,781	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
West Franklin,	871	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
	10,751	90	101	4	2	239	16	2	3	76	37	99	121	897

Table Showing the Occurrence of Communicable Diseases by Months.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Chicken pox,	2	2	15	1	.....	1	.....	.....	.....	1	13	53	90
Diphtheria,	7	12	2	2	2	3	1	3	11	26	13	10	104
Erysipelas, .....	.....	.....	1	1	1	.....	.....	1	.....	.....	.....	.....	4
Impetigo contagiosa, .....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Measles,	23	123	45	6	12	6	.....	12	1	.....	.....	12	239
Mumps,	3	5	4	1	.....	.....	.....	.....	.....	.....	3	.....	16
Pneumonia, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Scabies, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Scarlet fever,	17	13	1	6	1	1	.....	1	.....	15	13	9	76
Tuberculosis,	1	4	.....	.....	.....	14	4	.....	.....	.....	1	1	37
Typhoid fever, .....	.....	.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	93
Whooping cough,	56	21	23	5	1	.....	.....	.....	10	13	.....	.....	134
	112	191	95	33	23	27	11	23	36	81	72	98	807

Chicken Pox.—This disease was reported from nine townships and in eight months, none being reported in May, July, August or September. A total of ninety cases, an increase of nineteen over last year, were reported. An outbreak in Perry township, which spread into Brady's Bend before it was brought to the attention of this office, was responsible for fifty-six cases during November and December. In order to check this outbreak it was necessary to close two schools and have the rooms fumigated, Hillville and Crisswell, in Perry Township.

Diphtheria.—There was an increase of nineteen, or a total of one hundred and four cases of diphtheria reported during the year. These came from nineteen townships, East Franklin leading with twenty-seven cases, and ranged from one in July to twenty-six in October. Among other measures to check outbreaks, it was necessary to stop the sale of milk and milk products from one dairy farm, and five schools, two in East Franklin, and one each in Kittanning, Red Bank, and South Buffalo townships, were closed and the rooms fumigated.

Erysipelas.—Only four cases of this disease were reported, one each in March, April, May, and August. Two of these developed in Manor township, and one each in Burrell and West Franklin. No causal relation was discovered. The respective premises were fumigated by the district Health Officers after recovery of the patients.

Impetigo Contagiosa.—Three cases of this disease were reported from East Franklin township in February. All developed in the same family and required no special action by this office.

Measles.—Including the milder type, or German Measles, there was a total of 239 cases reported as against 716 in 1913. The disease developed in eighteen townships, Brady's Bend leading with eighty cases, and was reported in every month, but July, October and November. The greatest number was in February, when 123 were reported.

In order to check outbreaks six schools, two each in Burrell and Manor, and one each in Madison and Kiskiminetas townships, were closed and the rooms fumigated.

Mumps:—This disease developed in Burrell, Cowanshannock and Manor townships, and was reported in January, February, March, April and November, a total of sixteen cases, or two less than last year, being reported.

Pneumonia:—Only two cases of this disease were reported. Both were from Bethel Township and in the month of February. Both premises were fumigated by the district health officer after recovery of the patients.

Scabies:—Three cases of scabies were reported. All developed in the same family in Red Bank township and were reported in February. The premises were subsequently fumigated, and there was no spread of the disease.

Scarlet Fever:—This disease developed in nineteen townships Madison leading with thirteen cases, and was reported in every month in the year but July and September. A total of seventy-six cases were reported, being an increase of three over last year. Five dairy farms were inspected on account of the disease. The stock was transferred from one of these premises and the sale of milk and milk products temporarily discontinued from the remaining four. Ten schools, six in Brady's Bend, two in Bethel, and one each in Mahoning and South Buffalo townships, were closed and the rooms fumigated in order to prevent further spread of the disease in the several districts.

Tuberculosis:—There was a total of seventy-three, or an increase of fourteen over last year in the number of cases of tuberculosis reported. These reports came from fourteen townships and during every month of the year. The above table sets forth quite plainly the results of seasonal housing conditions. The several health officers have been frequently reminded to see to it that all premises occupied by tuberculous individuals in their respective districts are thoroughly disinfected immediately after being vacated.

Typhoid Fever:—There was an increase of fifteen over last year, or a total of ninety-nine cases of typhoid fever reported. They came from eighteen townships, and in every month in the year but March. Nineteen of these cases are directly traceable to the pollution of a water supply by the indiscretion of men in a construction camp in North Buffalo township, and eleven to the water supply in Kittanning Borough. In a number of other cases similar causes are suspected but the evidence is not conclusive. It would appear that the preventive measures of the Department, as well as special instructions from this office in certain cases, have been pretty generally observed, as we do not find a single secondary case among those reported. It is equally

gratifying to note that not a single case is traceable to any of the eight dairy farms inspected and placed under special regulations.

The outbreaks in Kittanning and Ford City Boroughs are each the subject of a special report.

Whooping Cough:—A total of a hundred and thirty-four cases of this disease were reported as against eighty-one last year. They came from thirteen townships, and in every month but June, July and December. Red Band township leads the list with fifty-seven cases and Brady's Bend township has twenty-eight.

The work of the eleven district health officers has been uniformly prompt and careful, and as was said last year, "much of the success in controlling outbreaks of the various communicable diseases has been due to their constant watchfulness," is again applicable.

The past year brought increasing demands upon your representative for advice by Health Boards, school officials, and citizens generally in regard to health and sanitary matters of various kinds and the uniformity with which our suggestions have been followed is a matter of no little satisfaction.

In looking back over the year, I am again reminded of the uniform cordiality existing between the physicians of the county and your representative, and this report would be incomplete without an acknowledgement of the many courtesies extended to me by my fellow practitioners.

BEAVER COUNTY.

Dr. Bruce H. Snodgrass, C. M. I.

Chicken Pox:—Forty-five cases of chicken pox were reported by the physicians of Beaver County in 1914, twenty-six of these cases occurred in Moon Township in the months of January, February, and March. Other scattering cases appeared in seven other townships during the year.

Diphtheria:—Twenty-nine cases were reported in thirteen townships. The greatest number in any one month was six in January, but it was present in the county eleven months in the year.

Erysipelas:—Only four cases of this disease were reported. Two in Big Beaver Township in March and June, one in Rochester Township in May, the other in Independence Township in December.

Measles:—Twenty-seven cases were reported—fourteen cases occurred in Hopewell Township in October, November, and December.

Scattering cases in five other Townships during the year, principally in January, March and April.

Mumps:—Forty-seven cases were reported in eight townships, seventeen cases in March, twenty-two cases in December. Other cases appeared sporadically in January, April, and November.

Pneumonia:—Only two cases of this disease were reported by the physicians this year.

Scarlet Fever:—This was the most prevalent contagious disease in this county in 1914, eighty-one cases being reported. It was present more or less constantly throughout the year.

Tuberculosis:—Only two cases reported. Physicians seem to be a little careless about reporting tuberculosis and pneumonia.

Whooping Cough:—Thirty-one cases reported in four townships, fourteen in Greene Township in February and March; eleven in New Sewickley Township in March. The rest were scattering.

Health Officer, W. M. Miller, of Hookstown resigned during the year and his district was added to the district of Health Officer William Lance.

Health Officer, George Young, resigned during the year and Stephen Nicely of Darlington was appointed his successor.

Forms 36 received,	313	Dairy farms inspected for:	
Forms 37 received,	247	Diphtheria,	3
		Typhoid fever,	4
		Scarlet fever,	3
Inspections made by C. M. I for cases alleged to be			
Chicken pox,	10	Sale of milk stopped from six dairy farms.	
Mumps,	46	Miles traveled by railroad and trolley, 539.	
Scarlet fever,	4	Miles traveled by livery, 445.	
Measles,	1		

BEDFORD COUNTY.

Dr. Walter de la M. Hill, C. M. I. The year 1914 was ushered in with the presence of smallpox in Hopewell township. An epidemic of some thirty-five cases appeared in this township in December 1913, but by the latter part of January, 1914, it was checked, no new cases appearing.

In February I was called to check up an epidemic of whooping cough in Broad Top township. Six cases were found and ordered placarded.

On the 17th day of March Dr. Fawcett, of Rainsburg, telephoned me of the presence of a case of smallpox at Chaneyville, Southampton township. On the 18th of March I visited Chaneyville with Dr. Faw

cett and examined the case, H. A., and found a typical case of discrete smallpox. The disease had been present in this community for some weeks previous but as it was very mild, not much attention had been paid to it.

The first case known was a young man who in December, 1913, came to Everett and thence to Cumberland, Md., where he spent two or three days. He then returned to Chaneyville by way of Everett and about a week afterward developed a skin eruption without any constitutional symptoms. He soon recovered and his brother, who taught school in the village, contracted the disease but not feeling badly, continued to teach school with scabs on him. From this time on the disease began to spread throughout the community by way of the school, church, and two funerals which were held in the church and were attended by a number of persons who had the disease at the time. I was only able to find eighteen cases at the time and these cases were immediately quarantined. The epidemic gradually died out, although there were a number of cases concealed, which fact came out a long time afterward. All the schools were closed in this section of the township and practically every one in the community was vaccinated.

In May I was again called into Southampton township in regard to small pox and found four cases and a history of more having had the disease in a very mild form. These four cases were quarantined and no further cases developed.

In October, having been notified of a suspicious skin eruption in Broap Top township, I visited that section and found seven cases of scarlatina, part of whom had been going to school. After quarantining these cases and closing the school in the neighborhood, the disease ceased to spread.

Health Officer Blymyer notified me that there was an epidemic of chicken pox in Cumberland Valley township, near the Maryland line, and after investigating I found six cases of the disease traceable to the failure of a Cumberland physician to notify the health authorities in this State of a child whom he examined in his office and sent home into Pennsylvania.

In November Health Officer Blymer, of Bedford, notified me of a suspicious case of skin eruption in Cumberland Valley township. On investigation I found a case of scarlatina which was quarantined. No other cases developed.

BERKS COUNTY.

Dr. Israel Cleaver, C. M. I. Herewith please find report of County Medical Inspector's work for the County of Berks for the year 1914.

STATISTICAL SUMMARY OF WORK.

Card forms received: No. 36, 753; No. 37, 672.

Number of communicable diseases reported in order of frequency:		Alleged cases, no attending physician, except for smallpox:	
Whooping cough,	157	Chicken pox,	26
Chicken pox,	145	Mumps,	22
Mumps,	120	Smallpox,	15
Typhoid fever,	103	Diphtheria,	8
Diphtheria,	82	Typhoid fever,	16
Scarlet fever,	75	Whooping cough,	9
Measles,	34	Measles,	1
Smallpox,	14		
Tuberculosis, (pulmonary),	11	Dairy farms inspected for:	
Erysipelas,	10	Typhoid fever,	11
Pneumonia,	3	Diphtheria,	12
German measles,	2	Scarlet fever,	5
		Smallpox,	2
		Sale of milk stopped,	5
Total,	756	Stock transferred,	1

From the above it may be noticed that of the thirty-three reportable diseases, only twelve appeared in the County.

A feature differing from the experience of previous years is that while the variety of the diseases has been less, there was not a single township that escaped entirely.

Cumru had the largest number, viz., 130, and Upper Bern and Greenwich the smallest, viz.; one each.

The numerical proportion was of very unequal division. Thus whooping cough, chicken pox, and mumps totaled fifty-six per cent. of all the cases, and it is to be observed that these represent almost exclusively the diseases of children, the kind of ailments popularly regarded of no significance from the point of being severe, and still less dangerous.

Chicken Pox: Of this disease Cumru township had the largest number, viz., thirty-six; Muhlenburg next with twenty-two; and Spring, twelve; a total of seventy, or nearly fifty per cent. of all cases reported. These three townships have closer and larger inter-communication with the city of Reading than any of those with which it is girdled, and it is fair to presume that there was mutual helpfulness in spreading the disease in the City and these suburbs. A large alien population occupies Cumru in the section known as Millmont and Oakbrook. Any person familiar with the conditions under which these people live will understand the difficulty of enforcing quarantine and isolation among them, and it was in this class that

the affection was most prevalent. In those instances to which the C. M. I. was called, the history of probable contact was either so indeterminate or conflicting that a decision could rarely be made. In almost every instance where a section was affected, the origin came from families that employed no physician and sent the children to school before quarantine was lifted, and the teacher had to notify the Health Officer of the outbreak in his school. Twenty-two townships were visited by this disease.

Whooping Cough: Whooping cough appeared in twenty-two townships, Cumru leading with sixty-one; next Muhlenberg, twenty-two, and Spring, twelve, a total of ninety-five, or sixty per cent. of all cases reported. What has been said of chicken pox in the relation of these townships to the City of Reading is equally applicable to whooping cough. The Department makes it optional for the C. M. I. to investigate these cases, but there are a few in which the conditions were such that the parents involved desired an investigation. One instance will illustrate how this disease may be disseminated in areas not contiguous:

On October 27th I visited cases of whooping cough in two families in Penn Township, viz., Ira Bashore and Jerome Bagenstose, the latter employing a physician and through his report the Health Officer obtained his first knowledge of the existence of the cases. The first case appeared in the Bashore family, the contact being as follows: The child visited his grandfather in Bethel township on or about September 1st, where there was a child having a cough not recognized at the time as pertussis. After returning home, the Bashore child developed a cough with a pronounced whoop, and soon after information came that the case in Bethel township was whooping cough. In the meantime the Bashore and Bagenstose children, as adjoining neighbors, played together, three cases showing in the latter family while there was but one affected in the former.

Mumps: Mumps visited sixteen townships; Washington, Marion, Lower Heidelberg, and Maxatawny reporting the majority of the cases. Spring was a close follower and the only one likely to exchange with the City of Reading. The mode of propagation prevalent was very similar in this to that found in all these milder diseases, viz., from affected families without a physician, with a return to school before the end of the quarantine period, and then through the school community.

One interesting investigation deserves record in this connection. On January 23rd, after certain reports made by Health Officer Stengel, regarding cases of alleged mumps in Washington township, I made a visit of investigation, discovering eighteen cases in ten families. All charged the Haydt school as the source of contact, but there seemed to be a combination of ignorance as to whom the first

cases could be assigned. I had sufficient evidence, however, that some cases developed in the school and closed it for disinfection. At one house alleged to have cases I could not discover anyone at home, though Mr. Stengel saw the lady of the house and two children the day previous and was sure of the existence of the disease on the premises. Consulting the Commissioner, I was instructed about my authority given by his office to make forcible entry into the house to perform my mission, but policy indicated the use of a local constable with a warrant to do this violence. The constable refused the job, saying he knew the woman and that a pot of boiling water was likely to be the greeting when the door was forced open. Further conference with the Commissioner per telephone secured permission to have one of the State Constabulary to accompany me and let him storm the premises. On our way this officer said my case was a civil offense and he doubted his right to act except it came under the class of felony. We went to the place to find it locked and apparently deserted. The officer expressed willingness to act if armed with a warrant and the nearest Justice of the Peace was then visited. He doubted his authority to give such a warrant, whereupon communication was again opened with the Commissioner who "read him the law." Still doubtful, he called up our County District Attorney, who told him a warrant was not necessary, seeing that by virtue of my official position under the Department, I had right to force admission in my own person. We returned to the mumps citadel, instructing the officer that I would "bust" that door myself, and should that pot of hot water develop, he had a good case for his service. Calling the lady from the outside, I proclaimed my name, office, and purpose of visit and said I would break in her house if not opened in a civil manner. Immediately the door was opened, and Mrs. ——— cordially invited us to enter, without the boiling water being in evidence, and I was able to perform my whole duty without protest. The only thing to mar this happy issue was the charge of Dr. Royer that he heard the rumblings of my voice in Harrisburg. H. O. Stengel says the appearance of the State Constable was valuable because he has not since had protest to his work in a community not in full accord with Department rules.

Typhoid Fever: Typhoid was unusually prevalent in rural Berks this year and appeared in thirty-three townships. Bethel, Colebrookdale, Earl, Muhlenberg, and Union seemed to be the storm centres of the malady. In the majority of instances coming under my notice, the source of origin was a polluted well or spring from which the family obtained its water supply. There were also a number of cases developed by contact, negligence in isolation, and use of eating utensils. One report from Bethel township will illustrate this. This family consisted of nine members, who, with a married

daughter and her husband, dwelt under the same roof, a household of eleven persons. The married daughter had gone to nurse an acquaintance in a village near by, who the attending physician said had bronchitis. She returned home August 8th. On the 25th she was taken ill with lumbar pains but no marked fever until October 1st. On October 13th she miscarried a supposed six months foetus. A boy, aged five years, commenced with fever October 1st. Another, aged thirteen, took sick with like symptoms on the 18th; another, aged twenty, on the 26th. The father was affected on the 22nd, but was not ill enough to take his bed and continued his farm work. The sixth case had onset on 28th, and the seventh the same day. The eighth, husband of the first case, came down November 1st, another on the third, and the tenth and eleventh cases were seized a few days later; the last being the mother of the family. My visit to this family was made on November 12th, the husband taking to his bed the day previous. I met the attending physician, who said the first three cases were so atypical that he hesitated to call them typhoid fever and no precautions were taken to prevent spread to the other inmates. I had Widal tests made of every one of the cases, including the person in neighboring village diagnosed as bronchitis, and each gave a positive reaction. The well showed no pollution on Laboratory examination.

In Colebrookdale township five cases followed dilatory diagnosis in the first two, and no precautions taken. Two deaths occurred from the disease in one family.

In Earl township three cases were traced in their origin to a polluted well on the premises of the first, who died. The well was so situated that its waste, and probable percolation from the well itself, poisoned a creek entering a mill dam, which in turn infected another well from which five other cases developed.

Diphtheria: Diphtheria visited twenty-six townships; Bethel, Maxatawney, and Muhlenberg being pronounced as to numbers. The most prominent feature in my inspections of infected families has been my inability to trace the source of contact. Rarely could any one give me a history with definite pointing in this respect. With the fact that many cases of alleged tonsillitis to which no physician is called, and possibly diphtheritic germs existing in the upper air passages without causing illness of the host, also that in positive cases the microorganisms may live in these same passages longer than the admitted quarantine period, it seems to me that the only efficient preventative measure will be to allow no case under guise of tonsillitis, or symptomatic recovery from diphtheria, to mingle in society and especially attend school, until a laboratory trial shows that the Klebs bacillus is not to be found on the throat or nares

Bechtelsville, Washington township, presents an interesting diphtheritic history. This borough was progressive enough to have a Board of Health, at least nominally. In December, 1914, complaint was made to the Department that diphtheria was prevalent in the borough and not taken care of by its health officials. I was instructed by the Chief Medical Inspector, to investigate the matter and if necessary take charge of the work with the Health Officer of the district. My first visit was made on December 30th, 1914. I found conditions as charged, except that a properly organized board had no existence. Eight cases in as many families were found and the premises placarded and quarantined. The burgess said he thought he could complete the organization of his board and take up the work to relieve us. This, however, seems to have been a failure up to the present and the Department officers are still in control. Only four additional cases appeared after our first quarantine work, whereas I had expected that a full score would follow.

Smallpox: Smallpox was the ending of the epidemic which struck the City of Reading and adjoining townships in October, 1913. It was imported by a walking case from a neighboring county, information of which was given us by the Chief Medical Inspector.

The townships affected were Upper Alsace, Cumru, Exeter, Muhlenberg and Ruscombmanor, representing in all fourteen cases. I visited every one when first reported and again the premises when quarantine was withdrawn. All the rules of the Department were enforced and no case presenting anything unusual, detail is not necessary. There was, however, an aftermath deserving of more extended remark. In December of this year (1913) I was duly notified by Dr. Sunday, of Hyde Park, that he had two cases which he believed were varioloid, on the premises of John Rothermel, Muhlenberg township, and wished to meet me there to establish diagnosis. I pronounced them positive cases. At this visit the mother of the children, Mrs. John Rothermel, said she thought the disease was brought to the family by a relative, Moses Rothermel, living with them as one of the family. I met him and saw upon his face and hands the peculiar spottings of varioloid familiar to those having experience in this infection. Besides he gave a history of illness and symptoms characteristic of this infection. He said he consulted a physician in Reading when the eruption first appeared, who told him it was due to some impurity of his blood. On the strength of this advice he continued his work of a parapatetic watch cleaner and carpenter. He thus, as I believe, carried the disease to a family in Ruscombmanor township from which several neighbors also became victims. Last March (1914) he brought suit against me for \$5,000 damages by reason of holding him in quarantine for twenty-seven days, thus depriving him from earning a livelihood for

that period. By attorney I acknowledged service and have been waiting the calling up of the case ever since. It is to be hoped that the Department office is as little worried over the prospect as I am.

BLAIR COUNTY.

Dr. Joseph D. Findley, C. M. I.

I beg to submit the following summary of the work done in Blair county during the year 1914.

Two hundred and forty-seven cases of communicable diseases were reported as follows.

Diphtheria,	44	Smallpox,	19
Typhoid fever,	49	Whooping cough,	14
Measles,	45	Pulmonary Tuberculosis,	5
Scarlet fever,	52	Cerebrospinal Meningitis,	1
Chicken pox,	14	Malaria,	3

These cases required one hundred personal investigations by the County Inspector for purposes of diagnosis or prevention of extension of the disease, divided as follows:

Smallpox,	81	Chicken pox,	6
Typhoid fever,	11	Measles,	2

In making these investigations it was necessary to travel 594 miles by rail and 268 miles by livery. The eight district health officers forwarded 187 reports of placarding and 196 reports of premises disinfected.

Smallpox: The smallpox epidemic in the latter part of 1913 extended into 1914, and during the first six months of the year this disease was more or less prevalent in Bellwood and vicinity and in the city of Altoona. An investigation was made in Bellwood in December, 1913, and ten cases were found in three families. Two of these families had not employed a physician, in the other the attending physician diagnosed chicken pox but failed to report the cases.

On January 11th I made a second investigation in Bellwood and vicinity and found eight houses under quarantine for smallpox and seven where there had been smallpox but the patients had all recovered. The infection began at three different points, all from contacts with the W. case in Altoona, and had been going on ever since under the impression that it was chicken pox. The disease was of a very mild type which made its detection difficult and many of the cases were not attended by physicians, hence no quarantine was established.

Fifty-five personal investigations were made in connection with smallpox during the first six months of the year. At Hollidaysburg it was found that the school authorities were not enforcing the vaccination law. I directed the Board of Health to have representatives visit the schools, examine all children and send the unvaccinated home. One room had only one child who had been vaccinated. The same condition was found to exist at Gaysport and in many of the township districts, where the school boards were ordered to enforce the vaccination law to the letter. In Altoona the local authorities did everything in their power to reach all contacts, but with cases in the active stage attending moving picture shows and bar rooms it was impossible to reach all contacts. By July the epidemic had subsided and we had no further trouble.

Two dairy farms were inspected on account of typhoid fever and diphtheria. Sale of milk was stopped on two dairy farms and four schools were closed on account of outbreaks of communicable diseases among the pupils.

BRADFORD COUNTY.

Dr. T. Ben Johnson, Jr., C. M. I.

Again it is my pleasure and for the fourth time since doing Department of Health work, to submit to you from records on file in this office, a brief report of the work as done by me and the Health Officers of this county for 1914.

As County Medical Inspector, very often it has been necessary for me personally to investigate communicable diseases, reported to me direct from the Health Officer in whose district the diseases may exist. In summing this report, I find that it has been very necessary for me to visit twenty-two individual townships and to do this properly, it was necessary for me to travel by railroad and also by livery to say nothing of the miles walked on foot. By rail I covered six hundred and fourteen miles, and by livery, one thousand one hundred and twenty miles.

During the year there have been received in this office, forms No. 36 to the number of four hundred and thirty-eight. These have been for eight of the diseases as required by law and is a decrease over the number reported 1913, in both cards and cases. Forms No. 37 show a total of two hundred and eighty disinfections as performed by the twelve Health Officers, doing the work in the county. All cards

are carefully examined immediately upon receipt, being properly entered upon the memorandum record and then forwarded direct to the Harrisburg Office.

In 1914, I personally investigated seventy-two individual cases; and whenever possible several cases of the same disease were examined in one trip. Cases as inspected by me, are as follows:

Measles: During the months of March, April, May and December, this disease seemed most prominent in several of the townships over the county and our records show a total of one hundred and ninety-two cases, as reported by Health Officers and physicians. Out of this number I personally inspected sixteen cases in but three townships. In one of them there was an epidemic which led me to close the Terry School for disinfection; there was another in Athens township, where diphtheria and measles existed in the East Athens School, which was also closed pending disinfection. This disease existed in twenty-three different townships and is a considerable increase over 1913. I am sorry to note this, as 1913 report was rather favorable in wiping out this disease to an extent.

Chicken pox: Thirty-four cases of this disease were reported by physicians and householders in seven of the thirty-seven townships, the greater number prevailing in December. It was made necessary for me to visit two townships to check a diagnosis in eighteen cases. On one of these trips, I closed the West Burlington School for fumigation, the health officer performing the work, when the school was reopened at the end of the usual school closure period. This is a decrease in the number reported for 1913. This disease seems very spasmodic, prevailing strongly one year and then subsiding the next.

Diphtheria: During the year there were reported to me forty-eight cases of this disease in eighteen different townships, and out of this number I personally investigated twelve cases in eight townships. Nine of the cases were on a dairy farm on which restrictions were established and the sale of milk prohibited, unless taken care of from without the infected house. Quarantine rules and regulations were lived up to in all instances, the general public is fast learning the necessity of such. On November 12th I went into Armenia, where I diagnosed two cases of diphtheria on a dairy farm where the children had been taken ill at school. This school, Covert School, was closed for disinfection.

On December 17th, I went into the Athens district, where diphtheria had existed at the East Athens School. This school was also closed for fumigation, the fumigation being preformed by our health officer. This disease seemed most prevalent in the month of October and exceeds the number of cases reported in 1913, to the number of thirty-four.

Mumps: The total number of cases reported in 1914 was forty-nine and occurred in seven different townships. Out of this number it was necessary for me to make a personal inspection in Terry township. On February 20th I went to Wyalusing, after receiving a telephone message from the health officer, to investigate mumps in Terry township. On account of the non-appearance of the health officer, and extremely bad roads, I was forced to return to Towanda and report no trip. On February 23rd, I again returned to this district and, after making a complete investigation, I was unable to find anything of a definite character and so reported my findings to the Department of Health or Division of Medical Inspection. This disease was most prevalent during February and March and shows a decrease from the number reported for 1913.

Scarlet Fever: Twenty-nine cases of this disease were reported in eleven different townships and from card reports received from the health officers, it was necessary for me to investigate several cases personally. I inspected seven cases in five townships, and after establishing proper restrictions, no epidemic was feared. This disease occurred on three dairy farms, and the householders were cautioned to have milk and herd taken care of. This was done properly, there being no contact with the occupants of the house in any way. The greater number of cases of this disease were reported in the Athens and Wyalusing districts, and occurred during the months of January, March and April. In 1913, we had a greater number of cases than in 1914, when thirty-nine cases of scarlet fever were reported.

Tuberculosis: During the year of 1914, thirty-three cases of this disease were reported in eighteen different townships, and I feel gratified that physicians are learning to report this as communicable. By order of the Medical Inspector of Dispensaries, I made four trips to enter patients on roll at this Dispensary No. 44, and on one of these occasions, on June 30th, I inspected a dairy farm at Leroy for this disease. The usual restrictions were made and to my own personal knowledge were lived up to in every way. On December 5th, by order of the Chief Medical Inspector, I also made a trip to Athens, and in company with Dr. Stevens, went to examine the B—— children of that village. There had been some controversy about the children going to school on account of tuberculosis, this occurring when Dr. Stevens examined the school, excluding all cases of communicable or suspicious diseases. I found the children to be in the active stage of the disease, confirming Dr. Steven's diagnosis. Most of the cases reported are, or have been, patients at this Dispensary during the past year.

Typhoid Fever: This disease in this county has totaled a number of thirty-three in seventeen separate and distinct townships of the district, and occurred in nearly every month during the year. Out

of this number it was necessary for me to make thirteen personal inspections, diagnosing twelve cases and examining the dairy connected with each case, except in one instance. This trip was made January 4th, into Wyalusing township, when I was unable definitely to diagnose the character of the disease. On this trip I also looked up Malarial Fever, but nothing definite was found. Typhoid fever seemed most prominent in the vicinity of Troy or around through the districts of that section, where the Troy epidemic occurred about three years ago. Water containers were requested from the Department on several occasions, which proved more than beneficial, water pollutions showing the direct cause of disease in two or three instances. Rigid restrictions were made in connection with dairies, the sale of milk ordered stopped until some one from without the infected house could care for the herd and milk products, and I firmly believe that in each instance the law was lived up to. In 1913, forty-five cases of this disease were reported, twelve more than in 1914. I trust my report for 1915 may still show a smaller number, or, better yet, that I may hope to have no report on this disease at all.

Special Inspections: On March 16th, I went to Athens upon order of the Department, relative to the Gibbs violation of quarantine. Conditions at this time were so positive and the violation so flagrant that an arrest was ordered. Mr. Gibbs was brought into Justice's Court and afterward paid his costs for his misdemeanor. This is the only case in which legal action was taken during the year, which I recall at the time of this report.

May 25th, upon your order, I went to Wyalusing for a conference with the Borough Health Board relative to their quarantine and care of cases of communicable diseases existing there at that time, there having been considerable controversy relative to the reporting of many cases of mumps. I went over this situation with Dr. Chamberlain and Dr. Bosworth, both members of the Board, and after considering the situation from all standpoints it was amicably agreed that they were doing very well under the circumstances. No further complaint was received by me and no further procedure was instituted.

On June 28th, at the request of the Division of Engineering, I again visited the creamery known as the N. Abramson & Company's Creamery, at Ulster, and found conditions to be most deplorable. A report of my findings was immediately sent to Harrisburg, but no action was ever taken. This was the third or fourth inspection ordered by you without any appreciable or desirable results and probably the same insanitary conditions would have existed to this date had not the building, together with its entire contents, been razed to the ground by fire, on or about September 21st, 1914. This caused complete and entirely satisfactory abatement of the existing nuisance.

During the year of 1914 the work of Medical Inspection for the County has not been as extensive as in some of the previous years. However, it has required my personal attention for several and practically all the months during the year and some of the trips have been extremely long and tedious, and, upon one or two occasions, I was forced to give up the intended trip owing to bad weather conditions and impassable roads. The work has been shortened and made much easier by use of the automobile, and in this manner the Department has been saved a great deal of expense with reference to time.

This community has been practically free from epidemics of any kind, with the exception of small localized conditions of the minor diseases which have existed in a few of the school districts. It has been my pleasure to call on a great many of the physicians in the county and to be of service relative to the regulations of the State Department of Health. The physicians have always been extremely courteous to me and have extended all possible aid in every manner, with but one or two exceptions, these having been reported to the Department by letter at that time.

BUCKS COUNTY.

Dr. I. Swartz, Plymire, C. M. I. I beg to submit a summary of the work in Bucks county for the year 1914, during which time the duties of the County Medical Inspector required visits to the different townships for the inspection of outbreaks of communicable disease; inspection of dairy farms during the course of typhoid fever, diphtheria and scarlet fever; and the examination of alleged cases of communicable disease not under the care of a physician.

I have traveled 974 miles by railroad, 1117 miles by horse and buggy, and 2,596 miles by automobile; a detailed report for each day's work was forwarded to your Chief Medical Inspector for further instruction, guidance, and filing.

During the year 637 reports of placarding for communicable disease (Form 36) were received from the eleven district health officers in the thirty townships in the county. These officials also sent in 663 reports for disinfection (Form 37). All reports were carefully examined, and, if incomplete, they were returned to the proper health officer before being entered on the records of this office.

Typhoid Fever: On March 19th, I inspected two cases of typhoid fever in Langhorne and Middletown townships adjoining with the co-operation of the Langhorne Board of Health. I suspected an infection of a local retail milk service, and followed the discontinuance of the sale and delivery of all milk products from G. W. R.'s dairy farm, where the disease had recently existed, no additional cases developed. Bacteriological examinations of specimens of water from this dairy farm used for washing dairy utensils showed the presence of *B. coli*, and the supply was ordered abandoned until disinfection and subsequent examinations should prove a pure supply of water. On May 13th I inspected three cases of typhoid fever in the village of Wycombe (Wrightstown and Buckingham townships), made two additional inspections, had specimens of the well water supplies examined in the Department's Laboratory, studied every avenue of a possible source, and finally was well satisfied that a certain supply of raw oysters which the three men had purchased and eaten at a local restaurant were infected and were possibly collected from infected beds. It was the last barrel of the season; careful note of dates was taken, the incubation period was carefully considered from the time of eating the oysters and the onset in the individual case, etc; after the supply was exhausted, plus two weeks, no additional cases developed. It was learned the three patients were the only persons who ate any of the oysters in their raw state. I should add, however, one further case of the disease to the three cases, making four in all, *i. e.*, the local physician (Dr. L.), the proprietor of the local newspaper, a mechanic, and the wife of the restaurant proprietor. I inspected one case of typhoid fever in Falls township, adjoining Morrisville borough, where the disease is known to exist. The filthy raw water used in this neighborhood from the Delaware river is at least unfit for drinking purposes. I inspected one case of typhoid fever in a recently unoccupied tenant house in Middletown township. About four years ago five cases with three deaths were investigated and noted on adjoining premises. The well of water was placarded and specimens were collected for laboratory study. On September 5th I inspected four cases of typhoid fever, with one death, in Middletown township on the border of Langhorne borough. With the assistance of Dr. H. L. and Dr. J. B. H. it was found that these patients had been drinking from an old hole along the roadside (uncovered, etc.) into which spring water was flowing together with drainage. I ordered specimens of water collected for laboratory study and the box which held the water torn out or blown out of the ground. I inspected four cases of typhoid fever on October 12th in three households in Springfield township. The first patient was possibly an ambulatory case and recognized late. I could not learn where he was infected. The three additional

patients were secondary cases due to close friendship, lack of care, and no disinfection of the excreta and sick room utensils.

During the year I have inspected ten dairy farms when typhoid fever was reported to exist on the premises, and ordered such regulations in each instance as were necessary to safeguard the public.

Diphtheria: On April 27th I inspected a case of diphtheria on the premises of F. A., in Bristol township. A sister had had a sore throat about four weeks earlier, but was without medical attendance. April 29th I examined, with Dr. J. R. U., an alleged case of diphtheria on the premises of D. F. S., in Richland township. The diagnosis was positive with marked laryngeal involvement, but a source of the disease could not be learned. The teacher of the local school gave a history of a number of children having had sore throats during the previous month. I examined five or six of them but could make no positive diagnosis at so late a period; three of them showed evidence of a recent inflammation of the pharynx and tonsils.

On May 14th I examined an alleged case of diphtheria on the premises of A. C., Lower Makefield township, whose wife was ill. Positive diagnosis and absolute quarantine were established since the husband had been treating the woman with medicine from a Trenton drug store. Collected swabs from tonsils, pharynx, and nares, and on the 18th of May the laboratory report confirmed the diagnosis. The explanation of the apparent neglect on the part of the husband was that he could not afford to have a doctor more than one time.

On May 22nd I inspected two cases of diphtheria on the premises of M. T., Middletown township. A child of F. W., living at the J. W. Works in the same township, had been sitting with one of the T. girls in school while the former had a sore throat without medical attendance. The second case in T's household contracted the disease from the earlier patient in the same house.

On November 30th I was called to Upper Black Eddy, in Bridgton township, on account of an epidemic of sore throats, a few of them being attended by the local physician, who made a diagnosis of diphtheria, and others by a New Jersey physician who did not report any cases. I saw seven positive cases and collected swabs from the nose and throat of ten additional children for laboratory examination. The local school board cooperated readily, and the Upper Black Eddy schools were disinfected thoroughly and closed until further advised. On December 3rd I collected specimens for laboratory examinations from the nose and throat of four additional school pupils in Upper Black Eddy, Bridgeton township. Later reports from the Department's Laboratory confirmed my positive diagnosis of the four cases, bringing the total number of cases of diphtheria in the village to eleven. Strict orders were issued to the health

officer that he must maintain effective quarantine at each of the homes placarded and that all public places must be kept closed until advised from this office. The symptoms in most of the cases were mild in character, and, therefore, they were not recognized early. Laboratory findings confirmed the diagnosis in every instance where placarding was ordered by your Medical Inspector. During the year I have inspected ten dairy farms when diphtheria was reported to exist on the premises and in each instance effective regulations were established.

Scarlet Fever: On January 5th I investigated two possible cases of scarlet fever at Ferndale, Nockamixon township, not reported by the attending physicians. Mrs. A. F. told me that her daughter D. developed an extensive eruption prior to December 20th, 1913, and the doctor who attended the case told her it was a "stomach rash." The mother also stated voluntarily that recently when the child's underclothing and stockings were removed the "pieces of skin would fly about the bedroom." I did not examine the child, but called on Dr. ——— and the latter refused to admit a diagnosis of scarlet fever—said the child did not have sufficient fever to cause the extensive desquamation; the mother told me she saw when the child undressed. On the same date Mrs. F. S. at Ferndale, told me that her daughter R. had an extensive rash prior to December 10th, 1913. Dr. ——— attended the case and made a diagnosis of "stomach rash." N. S. and his small son F. who had been visiting at this place in Ferndale later had scarlet fever at N. S.'s home in Doylestown (reported by attending physician). Ferndale had further been the source of a reported case of scarlet fever in Plumstead township, the family having been visiting in Ferndale during the early holidays.

On January 22nd I inspected four cases of scarlet fever in three households in Falls township. On finding that they were pupils in the Morrisville Borough schools I communicated with the Morrisville Board of Health and learned that scarlet fever existed within the borders of the borough. The Board again ordered the Morrisville schools closed for a more thorough disinfection. I discussed methods with the President and Secretary and it was agreed that the local schools would be kept closed for a period to cover the incubation days of the disease.

February 2nd I examined three alleged cases of scarlet fever among pupils of the Riegelsville schools, Durham township, and made a positive diagnosis of two cases. On the same date I also investigated three alleged cases of scarlet fever in Durham township not reported by the attending physician. Mrs. C., wife of C. T. C. at Riegelsville, Durham township, told me her daughter J. became ill on or about January 4th with vomiting, high fever, and an eruption and sore throat. Her son A. became ill on or about January 10th with sore

throat, vomiting, high fever, followed by an eruption. Dr. ——— at ———, New Jersey, had been attending professionally and had diagnosed the first case as "roseola." When the boy sickened Mrs. C. (who says she had been a professional nurse) told the doctor she "knew what was the matter, she had seen many cases before, it is scarlet fever," etc. Dr. ——— replied "I guess you are right." Dr. ——— had been examining specimens of urine from both children during the illness, and had permitted the husband to go from Riegelsville to Philadelphia on the train and return daily, simply telling the mother and father to be careful. February 2nd Mrs. S. C. B. at Riegelsville, told me that her son C., a pupil of the school, sickened on or about January 1st with sore throat followed by an eruption. The mother told me before I asked for the information that each morning after the boy arose from bed during the latter part of a three weeks period she used a dust pan and brush to collect the pieces of skin (scales) from the side of the bed; that desquamation included the hands, ears, and feet. She further told me that Dr. ——— attended professionally and made a diagnosis of "roseola." The physician did not report the case. I issued strict orders to the Department's health officer to follow up every suspicious illness promptly through cooperation with teachers in Durham and Nockamixon townships, and if additional cases of scarlet fever were found, I intended to take up with school directors the matter of closing schools for a time covering the incubation period of the disease.

On March 8th I examined an alleged case of scarlet fever in Springfield township and another alleged case in Richland township, and made a positive diagnosis of both cases. March 4th I inspected four cases of scarlet fever in Bensalem township and ordered the school in Eddington closed for disinfection. The apparent source was Bristol borough where a number of cases of the disease exist. On March 18th I inspected two cases of scarlet fever among the pupils of Spinnerstown school, Milford township. On March 6th there was a visitation of school children in a sleigh from Richlandtown School to the Spinnerstown school, and with official consent, as I have been reliably informed, while scarlet fever was epidemic in Richlandtown borough, with one or two deaths. A boy examined on the evening of the 5th of March was permitted to go along and this boy sickened in the Spinnerstown school room during the visit the next day, was covered with an extensive eruption, and was taken back with the party of children to Richlandtown, where he was ill with scarlet fever. In consequence of the contagion thus brought to the Spinnerstown school, M. R., a Spinnerstown pupil, subsequently became very ill with the disease and F. M., another pupil, also contracted the disease. March 22nd two additional cases of scarlet fever were inspected among the pupils of the Spinnerstown School, due to the

visit of the school children from Richlandtown while scarlet fever was epidemic in the borough. On March 27th I examined two alleged cases of scarlet fever in Nockamixon township, making a positive diagnosis in both cases. I also inspected seven cases of scarlet fever in Durham township and five cases of scarlet fever in Nockamixon township, adjoining townships. More care in studying earlier cases in the community in January when two physicians overlooked the proper diagnosis might have prevented the contagion spreading in this manner. Local schools were closed for a definite period through cooperation with the directors and a thorough disinfection of school rooms was ordered.

On April 13th I inspected seven cases of scarlet fever with three deaths in Middletown township, the teacher of the Edge Hill school being one of the number who died from the disease. South Langhorne Borough, where the disease was recognized before cases developed in Middletown township, had two deaths. By co-operating with the school boards, Boards of Health, and the churches of Langhorne borough, South Langhorne borough, and Langhorne Manor borough, all public places in these boroughs and the portion involved in Middletown township were thoroughly disinfected and were kept closed for a time to cover the incubation period of the disease. A malignant type of scarlet fever in South Langhorne borough and Middletown township was found, but was early controlled by absolute quarantine and strict regulations, and the disease was promptly stamped out. On June 6th I inspected three cases of scarlet fever in the Edge Hill School, Lower Makefield Township, and on June 29th I inspected two additional cases among pupils of the same school. The source of infection was possibly Trenton, N. J., on the opposite side of the Delaware river, where the disease was known to exist with large numbers of cases. On November 7th I inspected three cases of scarlet fever on premises of L. S. and C. H., near Trevoise, Southampton township. The source of the disease could not be learned, but it is possible that Mr. M's child in the home of R. H. had recently been a victim of scarlet fever and, no physician being in attendance, not under regulations. The children who then had scarlet fever were frequent visitors in the R. H. household. During the year I inspected twenty-two dairy farms when scarlet fever was reported to exist in premises, and effective regulations on each dairy farm were established.

Measles: During the first five months of the year I examined eighty-five alleged cases of measles not under the care of physicians, the mothers frequently persisting in the belief that it is a harmless disease if the child is kept warm during the early part of the illness. I carefully instructed such families whenever possible, for I found that a talk with them was frequently appreciated when a false con-

struction had been placed upon the Department's work. On January 26th I inspected three cases of measles in Lower Makefield township. February 6th I inspected eighteen cases of measles among pupils of the Edge Hill School and four cases of the same disease in Oxford Valley school, Middletown township. Most of the cases were not under the care of a physician. Some of the older children in these school districts had attended the Langhorne Borough High School, and had recently returned to their homes in Middletown township ill with measles, only to infect their younger brothers and sisters. February 3rd I found three additional cases of measles in Middletown township not attended by a physician. February 28th I made a positive diagnosis of four cases of measles among pupils of Parkland School, and eighteen cases of measles in the Edge Hill school district, Middletown township, many of the children from the latter district attending school in Langhorne borough, March 11th I made a positive diagnosis of two cases of measles among pupils of Shady Retreat school, in Doylestown township. March 14th I found two additional cases of measles in Middletown township not under regulation. March 25th twelve cases of measles were inspected in the villages of Andalusia, Cornwells, Edington, and Bridgewater, Bensalem township. All cases were either adults or very young children. The source was possibly Philadelphia where many of the older patients were employed. March 30th I inspected five cases of measles in Bristol township, just outside of Bristol borough, having as a source Bristol borough where many cases exist. On April 20th I found eight cases of measles among pupils of the Church School, Springfield township. The school authorities were readmitting children to school just as soon as the eruption began to fade and without regulation, in violation of the law. During the month of April I found German measles to the number of seven cases in the Richboro school, Northampton township; six cases in Shaw's school, Richland township; eight cases in the Chalfont school, New Britain township; four cases in the Wrightstown school, Wrightstown township; and three cases in Falls township. May 22nd I made a positive diagnosis of four cases of measles in Falls township. During the latter part of May I found five cases of German measles in the Maple Point school, Middletown township, and four cases of the same disease in Milford township.

Chicken pox: During January I inspected eleven cases of chicken pox among pupils of the Taylorsville school, Upper Makefield township; five cases in the Sunny Side school, Bedminster township; three cases in the Fairview school, Warwick township; fifteen cases among pupils of Roeder's school, Milford township; and one case in Haycock township. During February I inspected fifteen cases

of chicken pox among pupils of the Riegelsville school, Durham township; eight cases in the Tohickon school, Richland township; nine cases in the Spinnerstown school, Milford township; five cases in Winners school, Richland township; and eleven cases in the Steinsburg school, Milford township. March 9th I inspected four cases among pupils of the Bridge Valley school, Warwick township. March 22nd I made a positive diagnosis of five cases in Richland township. October 21st I made a positive diagnosis of seven cases of chicken pox among pupils of Gerhard's school, Milford township. November 28th I made a positive diagnosis of four cases in Springfield township. December 4th I made a positive diagnosis of seven cases of chicken pox among pupils of Kauffman's school, Richland township.

Mumps: April 27th I made a positive diagnosis of three cases of mumps in Lower Makefield township.

Whooping Cough: On February 20th, as directed by the Department, I examined pupils of the Pineville school, Wrightstown township, and made a positive diagnosis of eight cases of whooping cough. On December 19th, according to orders from the Department, I examined pupils of the Almont school, West Rockhill township, and made a positive diagnosis of eleven cases of whooping cough.

Statistical Summary of the Work of the Year.

Examined cases alleged to be:		Dairies inspected for:	
Smallpox,	2	Typhoid fever,	10
Chicken pox,	157	Scarlet fever,	22
Scarlet fever,	27	Diphtheria,	10
Diphtheria,	25		
Measles,	85	Stock transferred on one premises.	
German measles,	43	Sale of milk stopped from 21 premises.	
Mumps,	3		
Whooping cough,	25		

Sixty-one schools ordered closed for disinfection on account of scarlet fever, diphtheria, measles, German measles, or chicken pox.

Two health officers were instructed at office; ten elsewhere.

Your County Medical Inspector has been consulted during the year by Boards of Health and School Boards, teachers, business men, civic clubs, welfare associations, and many citizens with helpful and gratifying results. Preventive medicine conserving child life is being appreciated, and measures with this end in view are often demanded by our people.

BUTLER COUNTY.

Dr. H. D. Hockenberry, C. M. I. I hereby present a summary of the work of Medical Inspection in the County of Butler for the year 1914.

From the several health officers representing the eleven districts into which Butler County is divided, there were received of Forms No. 36, 232; of Forms No. 37, 222; representing the various contagious diseases as follows:

Measles:—There were but eleven cases reported, which was a marked contrast to the wide spread epidemic of 1913.

Diphtheria:—There were sixty-two cases in the entire County, with but few fatalities. This was no doubt owing to the general use of antitoxin, and the tendency among the physicians to give large and frequently repeated doses. It has seemed to the writer that, in some cases, there has been an extravagant use of this agent,—not that the life of the patient is to be sacrificed to a mistaken sense of economy, but it has been his experience that after the second dose of antitoxin has been given, after twelve hours in the great majority of cases the acute symptoms subside, the spread of the false membranes is arrested and convalescence sets in. The use of immunizing doses on those who have been exposed to infection has produced very satisfactory results.

Scarlet Fever:—Of scarlet fever there were forty-nine cases, distributed over the entire County. In no section did this appear as an epidemic; neither has it taken on a virulent form.

Mumps:—Sixteen cases were reported.

Chicken Pox:—Twenty-three cases reported.

Whooping Cough:—Eleven cases.

The three last named diseases are looked on by the laity with such indifference that it is difficult to get a very full report of all the cases. Many families will attempt to conceal the presence of such cases in their homes for the purpose of getting rid of the little inconvenience of a quarantine.

Typhoid Fever:—Typhoid fever numbered in all forty-two cases. The fact that in some families secondary cases developed would seem to indicate a neglect or carelessness on the part of the physician or attendants. All such are cases that might have been prevented by the exercise of ordinary care.

Tuberculosis:—Eighteen cases were reported.

Pneumonia:—Two cases.

Erysipelas:—One case.

This completes the totality for the year 1914.

Visits of inspection made by the County Medical Inspector were as follows:

The first was occasioned by the development of a case of mumps in the Borough of Callery. The Health Board of that Borough not being properly organized, having no Health Officer, the case was reported to Dr. George Mathiott of Mars, Health Officer of Adams township, in which the Borough of Callery is located. Dr. Mathiott placarded the house in which this case resided and established the form of quarantine prescribed for such cases. A disagreement having arisen as to the diagnosis I was instructed by the Chief Medical Inspector to visit Callery, assist in making the diagnosis, and endeavor to effect an organization of the Health Board. This duty was performed January 8.

As complaints had been made to the Department at Harrisburg, of negligence on part of the Health Board of Harrisville Borough as to quarantine of cases of whooping cough, I was instructed by the Chief Medical Inspector to visit that Borough and insist that the Health Board perform its duties. May 18th, I made the visit of inspection, met with the Health Board, and explained to them their duties in the matter of protecting the public against the spread of contagious diseases.

A case of typhoid fever was reported to me by Joseph Criswell, Health Officer of Centre township, on the dairy farm of Harry Ralston of said township. I made a visit of inspection to this farm September 2, according to the regulations as set down in such cases. The milk produced on this farm had been shipped to Butler. As there was no means by which this milk could be protected from contamination, I ordered the shipment closed until privilege to resume shipment should be given.

On September 28, I made a visit of inspection to the home of G. W. Hicks, Forward township, by reason of a case of typhoid fever in his family; this being the second case within a few weeks. A careful examination of water supply showed nothing of water pollution, and the difference in time between the cases led me to think the second case had been infected from the first case, and as the first patient had been in a number of different localities, it seemed impossible to locate the source of his infection.

This completed my duties as Medical Inspector for the year 1914—a very unfortunate year for me, as I sustained a fracture of tibia and fibula on January 28th, and again, the last of the year, was laid up for repairs at the Johns Hopkins Hospital—Yet it is a good thing to live.

CAMBRIA COUNTY.

Dr. W. E. Matthews, C. M. I. During the year of 1914 I have visited many of the townships in Cambria County and have also done special work in the boroughs, being deputized to do so by the Health Commissioner or by the Chief Medical Inspector. I have kept in close touch with the fourteen different health officers, especially during an epidemic.

During the year 1,060 reports of placarding for communicable diseases, Form 36, were received from district health officers, against 1,006 in 1913. Also 820 reports of disinfection, Form 37, were received. After record of them was made they were mailed to the Department at Harrisburg every Monday morning.

Of the thirty-five reportable diseases we received reports as follows: Smallpox, cerebrospinal meningitis, erysipelas, pneumonia, typhoid fever, diphtheria, measles, chicken pox, and mumps.

Typhoid Fever:—Fifty-six cases of typhoid fever were reported, the same number as reported in 1913. March and May were free from the disease, September having the greatest number reported. The sanitary conditions are improving every year. As a rule I have found the majority of persons willing to correct all unsanitary conditions. In September typhoid fever developed in the orphanage at Cresson where there were a hundred and fifty children. Eight cases developed in all. I advised the Health Officer to have the water boiled, as well as to look into the milk supply. Samples of water were sent to be analyzed and were found to contain bacilli coli.

Diphtheria:—Two hundred and fifty cases of diphtheria were reported, October having fifty-five, the greatest number for any month. It was necessary to close many schools, have the rooms thoroughly fumigated, and establish a better observance of regulations before the disease could be stamped out. At Beaverdale the disease was of such a malignant type that not only schools but also places of amusement were closed until the disease was checked.

Scarlet Fever:—Cases of scarlet fever were reported every month during the year, a hundred and twenty-four in all, March having nineteen cases, the greatest number. In order to establish a diagnosis and inaugurate measures to check the disease, I found it necessary to visit some of the infected places, order schools closed and fumigated, and to instruct health officers to make quarantine absolute, using guards if necessary. Four cases developed in St. Francis College, Loretto, where there were in all two hundred persons. But one new case developed in the borough after the outbreak. A strict quarantine was established and no new cases developed in the College.

Measles:—Three hundred fifty-five cases of measles were reported, fifty-eight less than last year. They were distributed throughout the county.

Erysipelas:—Seven cases of erysipelas were reported. They required no special investigation, were widely separated geographically and bore no relation to each other.

Cerebrospinal Meningitis:—Five cases were reported. All were in the care of family physicians and required no action on the part of the Medical Inspector.

Whooping Cough:—Two hundred cases of whooping cough developed during the year, forty-one in July. In September I visited West Taylor township and found as reported a number of cases. A diagnosis was made, quarantine established, and schools and Sunday schools closed for a time. The epidemic was of such a malignant type and the number of cases so great, two deaths having occurred, that I felt this was the only way to stop the spread of the disease. No new cases developed.

Chicken Pox:—Eighty cases of chicken pox were reported in 1914. Quarantine rules were enforced and the disease was checked.

Mumps:—Seventeen cases of mumps were reported and required no action on the part of the Medical Inspector.

Pneumonia and Tuberculosis were reported from different districts in the county, but were cared for by family physicians.

During the year my attention has been called by telephone, letter, etc., to a number of cases of nuisances, such as dead animals, drainage of sewers, etc., into public streams. These calls have received prompt attention.

In addition to the brief summaries I have made every effort to keep close watch on all reports of communicable diseases. I have endeavored to make my work educational and to teach the people the principles of health and how properly to care for its maintenance. I believe the work of the Department is being appreciated more every year as the people are more willing to have their premises placarded and under quarantine. There is splendid co-operation of the greater number of Cambria county physicians and the health officers see the necessity of being moderate yet positive in their instructions to the people with whom they have to deal.

Statistical Summary of Work Performed During the Year.

Forms 37 received,	820	Examined cases alleged to be	
Forms 36 received,	1,060	Typhoid fever,	56
		Diphtheria,	250
		Chicken pox,	80
		Measles,	350
		Whooping cough,	200
		Mumps,	17
		Scarlet fever,	124

CAMERON COUNTY.

Dr. H. S. Falk, C. M. I. I hereby submit my report for Cameron County for year 1914.

Forms No. 36 received; 132 Distributed by months as follows:—
Forms No. 37 received, 100

	No. 36	No. 37
January,	3	0
February,	4	2
March,	40	8
April,	33	42
May,	12	21
June,	21	7
July,	2	8
August,	9	0
September,	1	5
October,	7	6
November,	0	1
December,	0	0
	132	100

The following cases were reported:—

Measles,	101	Mumps,	6
Whooping cough,	9	Scarlet Fever,	5
Chicken Pox,	9	Typhoid Fever,	2

During the year I inspected and checked diagnosis in sixty-nine cases and traveled 257 miles as follows:—

During March I traveled seventy-two miles and checked thirty-nine cases of measles.

During April I traveled eighty-eight miles and checked thirteen cases of measles.

During May I traveled twenty-eight miles and checked two cases of measles.

During June I traveled sixty-six miles and checked fifteen cases of measles and three cases of mumps.

During October I traveled three miles and checked six cases of chicken pox.

On April 26th, I received a telegram from Harrisburg concerning two residents of Sinnemahoning who were in contact with smallpox in Erie. I immediately went to Sinnemahoning and vaccinated one of the contacts; the other case was that of an old lady that was brought home with a broken hip and was not in condition to stand vaccination. I had a health officer fumigate all of their belongings and vaccinated all who were in contact with the old couple. No cases of smallpox developed.

On August 7th, I received a letter in reference to whooping cough in European Borough and on investigation found that the health officer had quarantined all cases that were reported and investigated all cases he heard about.

CARBON COUNTY.

Dr. E. G. Bray, C. M. I. Annual report and statistical summary for the year 1914.

Carbon County had no epidemics during the past year. Measles and diphtheria were more prevalent than other diseases, but at no time did these diseases get beyond control.

Typhoid fever seems to be endemic in the lower end of the County. It was reported as having occurred in fourteen cases.

It has been found that some of the physicians of the county do not always report cases of contagious disease under their care, although there is improvement in this condition over other years. It is to be hoped that the time is not far distant when our morbidity reports will be accurate indicators of the prevalence of disease in the county.

Diphtheria:—With the exception of March and June diphtheria was always with us. The cases were sporadic in character, and the disease was kept under control by careful quarantine and disinfection.

Typhoid Fever:—Of the fourteen cases of typhoid fever which were reported during the year twelve were in the lower end of the district. Each year this part of the county furnishes nearly all the cases of this disease and as yet no means have been devised to prevent this annual scourge.

Weatherly School Survey (Sanitary):—Because the school board of Weatherly absolutely refused to have made a medical inspection of their school children, the State Health Authorities exercised their right and ordered a sanitary survey of the school premises. Although they have a large and commodious school building it was built many years ago and it was found to lack some of the modern improvements essential for the health of the children. It is to be hoped that next year the directors of the school will ask the State to make a medical inspection of their school children.

Statistical Summary of the Work of the Year.

No. Forms—36 received,	201	Dairy farms inspected,	1
No. Forms—37 received,	178	Sale of milk stopped,	1
		Health Officers instructed,	3

CENTRE COUNTY.

Dr. S. M. Huff, C. M. I. I beg to submit the following summary of the work done through the office of the County Medical Inspector of Centre County for the year 1914.

During the year it was found necessary to make two visits to the Borough of State College, two to Snow Shoe Township, one to Penn Township, and one to Gregg Township.

Four hundred and eighteen reports of placarding for communicable diseases (Form-36) were received from the nine Health Officers in the county. These officers also sent in three hundred and eleven reports of disinfection (Form-37).

Of the reportable diseases, there were reports on ten during the year as follows:—

Chicken Pox:—Fourteen cases of this disease were reported by physicians during the year.

Diphtheria:—Thirty-four cases were reported during the year from ten townships.

German Measles:—One case of German Measles was reported from Huston Township.

Measles:—There were three hundred and fifty-four cases of this disease reported during the year, the greatest number occurring in one Township was eighty-seven in Gregg; Snow Shoe had sixty-three; Harris fifty-five; Potter thirty-eight; College twenty-seven; Worth thirteen; Rush twelve; Union eleven; Penn eleven; Huston eight; Ferguson seven; Spring seven; Patton six; Boggs four; Curtin two; Burnside one; Half Moon one; and Taylor one.

Mumps:—There were sixteen cases reported from nine townships.

Pneumonia:—One case of this disease was reported from Gregg Township.

Scarlet Fever:—Thirty-one cases of this disease were reported from seven townships.

Tuberculosis:—There were four cases reported from Rush, Potter, and Penn townships.

Typhoid Fever:—Twenty-three cases were reported, ten of the twenty-five townships being represented.

Whooping Cough:—Eighteen cases of this disease were reported from two townships.

CHESTER COUNTY.

Dr. Joseph Scattergood, C. M. I. As is the yearly custom, your County Medical Inspector herewith submits his report of the work done in Chester County for the year 1914.

There has been less sickness of an epidemic form than in previous years, and I believe the work of our Health Officers has been of a higher grade. With one exception, they have been prompt and efficient in their work. There have been but two changes among them through resignations.

Chester County has an area of 777 square miles with eleven boroughs, total population approximately, 50,000; and fifty-six townships with a total population approximately of 58,000, and an approximate area of 750 square miles, which latter territory comes immediately under the care of your County Medical Inspector.

The borough of Elverson has been incorporated within the past few years, but, so far, has failed to comply with the Act of Assembly and has as yet established no Board of Health. Owing to an epidemic of chicken pox in the Borough, it was necessary for the Department of Health to look after health matters here. On October 6th, I was authorized to visit the borough to investigate some cases of typhoid fever which had not been reported by the borough authorities. After an interview with members of Council, in which the necessity for their action was explained to them as to the establishment of a local Board of Health, no action being taken, the Department of Health took charge of health matters in Elverson according to the provisions of the Act of Assembly, placing the same in my charge, and I have deputized the health officer of a neighboring township, Mr. Essicks, to look after matters until such time as the borough authorities see their way clear to fulfill the provisions of the Act of Assembly.

It has been necessary in the performance of official duties at different times during the year, to visit practically all the townships and to travel a distance of 1,257 miles by automobile or livery and 662 miles by railroad or trolley.

Health Officers have reported placarding 576 premises (Forms 36) and disinfecting 524 premises (Forms 37). All of these reports were carefully examined and, if incomplete, returned for additional information. There were twenty-eight occasions to interview Health Officers regarding their work, either at this office or elsewhere.

Of the total number of reportable diseases, this office has had to do with thirteen; as follows:—

Erysipelas:—Sixteen cases have been reported, all under the care of physicians, and requiring no action on the part of your County Medical Inspector.

Chicken Pox:—A hundred and one cases were reported by physicians and householders, an increase of twenty-seven over last year. This does not, however, I believe, give a true picture of the prevalence of this mild disease, as many families did not employ a physician, nor have the householders reported the cases to the Health Officers. Your County Medical Inspector was called in to make a differential diagnosis in six cases where smallpox was suspected.

Diphtheria:—This disease occurred in twenty-six townships—sixty cases being reported in the entire county. In no district could it be called "epidemic." The largest number of cases occurred in Tredyffrin Township, which had ten cases. In the country districts remote from more built up neighborhoods, I believe many cases of "sore throat" were probably of a diphtheritic origin, but, in the absence of cultures, the more severe diagnosis was not made.

Measles:—This disease, which was epidemic in our county last year, did not make its appearance in many of our townships. There were a hundred and forty cases in all reported. The greatest number was from Caln Township, which reported eighteen cases. This does not in any way represent the entire number of cases throughout the county, as many householders, in order to avoid quarantine, have kept under cover this disease.

Mumps:—Eighty-nine cases are recorded. This is more than three times as many as were reported last year; there being an epidemic pretty generally over the county during the later months of the year. In certain districts, in order to avoid the quarantine requiring school exclusion, the cases, in many instances, were simply reported as "swollen glands." It was necessary for your County Medical Inspector to visit several territories to explain to the school authorities how they were being imposed upon and that if exclusion in all these cases from school was not consistently carried out, more drastic measures would be necessary. Following the advice given, I believe, in every instance the school authorities immediately tightened up on these evasions of the law and excluded all suspicious cases.

Pneumonia:—There were no cases of pneumonia reported; the physicians evidently overlooking the regulations of the Department requiring its being reported. We know that many cases did exist.

Scarlet Fever:—There were double the number of cases this year over the same period of 1913, the greatest number occurring in West Caln Township, which had twelve cases in all. The other cases were rather evenly distributed among twenty-three townships. I believe the law regarding the reporting of scarlet fever was very much better carried out this year than in previous years.

Smallpox.—In the early part of the year (March), a small epidemic of smallpox developed in and around the village of Toughkenamon in New Garden Township. In all nineteen cases were reported; the first one developing in a colored man who had been working at Brandy wine Springs, Delaware, but who traveled back and forth on the trolley car to his work. This man lived in a miserable shack with three other colored persons; the shack being situated in a small settlement of the colored race. Immediately absolute quarantine, with guards, was put over the place, all the neighbors were vaccinated and those with whom we had any reason to suspect he had come in contact. The officials of the West Chester, Wilmington and Kennett Electric Railway were notified of the fact of this man's traveling on their cars, and a general vaccination was done among their employees. It was impossible to trace the exact car on which this man traveled, so all of the rolling-stock was fumigated, and instructions given to the Company to have the same fumigated every night when turned in, which instructions they promised to carry out.

Seven days following the first case, two other colored persons were taken down with smallpox, living about a mile and a half distant from the first case. We finally were able to get an admission from them that an old colored woman made daily trips between these houses and carried the infection from the first case to the subsequent ones. The other cases in this epidemic were all white, and absolutely no connection could be made between the two colors, excepting for the fact that this same trolley line passes through Toughkenamon and all unvaccinated persons traveling thereon would have the same opportunity to contract the disease. All of the other sixteen cases, either traveled on the trolley or lived immediately alongside the track and would necessarily come in contact with trolley passengers. Absolute quarantine was placed on all these premises where the disease existed and guards placed over them. The Pennsylvania Railroad Company was notified of the disease, and it was thought advisable by their medical council to prohibit the stopping of trains at Toughkenamon Station, which worked quite a hardship on the people of the village, but, nevertheless, they submitted with more or less good grace. The trains resumed their service after about two weeks.

In all, about 1,100 vaccinations were performed on the persons living along the White Clay Valley from Kennett Square to West Grove. Some considerable alarm was felt at the beginning, but your County Medical Inspector had an opportunity to be present at several public meetings and satisfied the citizens that the health of the community was being well guarded, that no alarm should be felt over these few cases. At the same time the opportunity was used to advise and urge complete vaccination of all school children and in fact of all persons upon whom the operation had not been performed within the last five

years. Considerable resistance was felt in and around Kennett Square, but when it was made plain that the Department would insist on either vaccination or the closing of the schools and the manufacturing plants, the workmen finally consented and, with very few exceptions, all were vaccinated. During this entire epidemic, there were no fatalities. The public school in Tonghikenamon was closed for a period of three weeks after it had been learned that several of the children who developed smallpox had been in attendance only a few days before the rash broke out, and only opened after all had been vaccinated.

On the 7th of July, we had one family in Uwchlan Township where the householder developed smallpox, presumably from mingling in a bar-room in Downingtown with some "hobo" train riders who had come from an infected district near the centre of the State. Following this case, in exactly fourteen days, four of his children went down with the disease. The entire family, including the wife and seven children were removed to the pesthouse at Embreeville. They all made a satisfactory recovery.

After we first became aware of the existence of the disease, most prompt and drastic measures were instituted in each instance to prevent its spread. Vaccination of all contacts, without exception, was insisted upon and performed. The results show that our efforts were not in vain as there were no other secondary cases.

Tetanus:—Three cases have been reported, which required no action on the part of this office.

Tuberculosis:—Seven cases were reported from that many townships. Many cases developed in the boroughs which were probably reported through the local health boards. In West Chester, Coatesville, and Phoenixville, a great many cases have been treated at our dispensaries, and it has been the practice to send all those who wished to go to one of the State sanatoria. I think that the physicians and the people of the county are appreciating and realizing the advantages to be derived from the better facilities for caring for these unfortunate at our State hospitals. It is unfortunate that the necessity for reporting them is not appreciated more, both by physicians and patients, as no doubt many cases have been contracted through carelessness and ignorance on the part of households where this disease exists.

Typhoid Fever:—Our county has been reasonably free from this disease. Eighty-eight cases have been reported. Of these nine came from East Fallowfield and twelve from Valley township, which are immediately contiguous to Coatesville, where typhoid has been mnduly prevalent for some years. It has been scattered in small numbers throughout practically all the other townships. It was necessary for your County Medical Inspector to visit a number of farms on which the disease existed to see that quarantine regulations were

properly carried out. It is a pleasure to report that in every instance my visit was received cordially and with apparent satisfaction, as the farmer was anxious not to have his milk shipments cut off and also to protect his customers from any risk of infection. The unsanitary conditions, to which were traced a number of cases in the townships around Coatesville, were created by the throwing of night soil, taken from the privies in Coatesville, over the meadows which drained into the creeks through the farmland where dairies were kept in this neighborhood.

Whooping Cough:—There were fewer cases than during the previous year, but fifty-two cases being reported as against a hundred and twenty-eight cases last year. An epidemic was again present in Tredyffrin and Easttown Townships, where thirty-two cases of the entire number were located. The school authorities of these two townships were exceedingly careful not only to exclude the children on whose premises the disease existed but also to see that the health authorities were notified, thus enabling quarantine to be promptly established.

Impetigo:—One case of impetigo contagiosa has been reported to this office. Evidently the disease is not recognized by many of our physicians or else it is not reported.

Summary of the Work of the Year.

Forms 36 received,	576	Health Officers instructed,	28
Forms 37 received,	524	Schools closed,	5

Reason, Smallpox, measles and chicken pox.

There have been no complaints to this office of misconduct on the part of any of our sixteen Health Officers and, with one exception, before spoken of, all have done their work promptly and intelligently. It has been my endeavor in recommending names for health officers to replace those who have resigned for any reason, to obtain men of intelligence and education in order that the work may be done with tact and discretion.

Numerous consultations have been had with school boards, teachers, physicians, and boards of health of boroughs, and my office seems to have become almost a bureau of information on health matters, as daily numerous calls by telephone or in person or by post have come for advice regarding health and sanitary matters. Complaints are numerous and are attended to with promptness and, I trust, satisfactorily to those who have made them. Some unjust ones have been made, to which, after investigation, no attention was paid. I believe the work of the Department and the efforts of its officers are being more appreciated every year by the public as well as by the physicians. When necessary to visit various sections of the county on official business relating to any case of disease, it has been my practice, as

much as possible, to call in the attending physician and go over the health and sanitary situation with him, which, I believe, has increased considerably the good feeling of our physicians toward the Department.

CLARION COUNTY.

Dr. F. P. Phillips, C. M. I. Clarion County has an area of 600 square miles and is divided into twelve boroughs and twenty-two townships. The population of the county in 1910 was 36,638; that of the boroughs was 10,827. This leaves 25,811 coming under the supervision of the County Medical Inspector. The number of square miles coming under the supervision of the County Medical Inspector is approximately five hundred. The county is conspicuous by the absence of street car lines and macadam roads. It is also conspicuous by the presence of bad roads during five months of the year, it only being practicable to use an automobile seven months out of the year. I mention the area, the population and the conditions of travel, in order to give the Department some idea of the difficulties met by the County Medical Inspector.

The twenty-two townships are divided up for supervision by sixteen health officers. The work of the health officers has been satisfactory, with the exception of several who are practising physicians. I find that where practising physicians are health officers, they frequently incur the enmity of the physician who reports the case, probably because they in some cases doubt the diagnosis instead of attending strictly to their business and doing their duty as laymen health officer.

During the year 1914, three hundred and nine cases were reported. Of this number the County Medical Inspector himself reported more than one-third. Since we have forty-two practising physicians in the county, it would look as though the physicians are rather negligent, or that a great many families treat reportable diseases without employing a physician. The following are the diseases with which the County Medical Inspector had more or less to do.

Chicken Pox:—There were thirty-nine cases of chicken pox reported. March 17th I visited cases of chicken pox in Redbank township owing to the report that quarantine laws were not being obeyed. This I found not to be true.

Diphtheria:—During the year there were twenty-two cases of diphtheria reported. June 18th, at the suggestion of Dr. Clarke, of Ship-

penville, I investigated a suspicious case of sore throat in Paint township and made a positive diagnosis of diphtheria. I immunized those who had been in contact and established quarantine. July 18th at the suggestion of Dr. Cookson, of Venus, I visited a suspicious case of sore throat at Venus, Washington township, and made a positive diagnosis of diphtheria. I immunized seven persons who had been in contact and quarantined them.

November 1st I visited a suspicious case of sore throat in Elk Township, at the suggestion of Dr. Clarke, of Shipperville, and made a very positive diagnosis of diphtheria and immunized the contacts. I also advised heroic doses of antitoxin to be given to the sick child, but it died a few hours later. As this child had been attending the Pine City school, while suffering from the disease, I ordered the school room to be fumigated and the school closed for one week to make sure there should not be an outbreak.

German Measles:—December 2nd I investigated two families in Farmington township, whose children were ill with a suspicious rash. Made a positive diagnosis of German measles and had the Station school, where they had been attending, fumigated.

Measles:—During the year there were eighty-four cases of measles reported. April 10th, at the suggestion of Health Officer Sayers, I made a canvas of Redbank township in the vicinity of the Himes school, found three cases of measles and quarantined each case.

October 18th, at the suggestion of Health Officer Brown, I made an investigation of measles at Foxburg, Richmond township, where I found and quarantined twenty-two cases. The schools were closed and fumigated. On November 19th, I made a further investigation of measles at Foxburg, where I found and quarantined eleven cases.

Mumps:—There was only one case of mumps reported during the year. On January 6th I examined children at Millerstown school, Washington township, who were reported by the teacher to be suffering from mumps, making the diagnosis is of enlarged lymphatic glands.

Scarlet Fever:—There were ninety cases of scarlet fever reported during the year. February 27th, as ordered by the Department, I made an investigation of a family in East Brady borough, which was reported as having not observed the quarantine law. Found careful observance, and also found an epidemic of German measles which the borough had not been looking after.

July 13th, as ordered by the Department, I investigated observance of scarlet fever quarantine laws at Vowinckle, Farmington township. On July 24th, as instructed by a telegram received from the Department, I fumigated the mails at the Vowinckle postoffice, Farmington Township, owing to the report sent to Harrisburg that the Postmistress was taking care of a case of scarlet fever and handling the

mail. For the past few years there had been quite a number of cases of scarlet fever reported from Licking township and owing to the report from Health Officer Meals that he believed there were a good many cases not under quarantine, I made a thorough investigation and a house to house canvass of a large part of that township. On April 24th I found and quarantined six cases; on April 26th fifteen cases; on April 27th twenty-one cases; on April 30th thirteen cases. I am glad to report that after the house cleaning I gave Licking township there has not been a case since.

Typhoid Fever:—During the year there were twenty-three cases reported. On July 22nd upon receipt of card Form 36, affirming the sale of milk from a home in Farmington township where typhoid fever existed, I investigated the place and stopped the sale of milk and milk products, inasmuch as the wife who looked after the milk and milk products also attended the patient.

On Sept. 26th, upon receipt of card Form 36, reporting the sale of butter by a family in Limestone township, where typhoid fever existed, I investigated and stopped the sale, as the housewife attended patient and made butter. As ordered by the Department, on July 19th, I made an investigation of probable source of typhoid at Rimersburg occurring each year. Detailed report was mailed August 19th.

Whooping Cough:—During the year card Form 36 was received for forty cases, but evidently the health officers did not make out Form 36 for each case, as I have memorandum sheets showing more cases to have been investigated. On March 10th, Dr. Houston, of Knox, was deputized to investigate whooping cough at Monroe, Beaver Township, and found four cases in the school and two cases in two families.

On Jan. 29th, upon receipt of a report from health officer McLaughlin, of Knox township, that whooping cough was prevalent and not reported, I made an investigation and quarantined fifteen cases. On Feb. 6th, I made a further investigation and quarantined thirty cases, and on the 7th, eighteen cases. On March 5th, upon receipt of report from health officer Seigworth, of Farmington township, that whooping cough existed and was not quarantined, I investigated the affair and found seven cases, which I quarantined.

Statistical Summary of Work Done During the Year.

Forms 36 received,	309	Examined cases alleged to be	
Forms 37 received,	217	Diphtheria,	3
		Scarlet Fever,	56
		German measles,	3
		Measles,	35
		Whooping cough,	78
		Mumps,	1

Stopped sale of milk-on two premises.

CLEARFIELD COUNTY.

Dr. S. C. Stewart, C. M. I. I beg to submit the following report of work done in Clearfield County during the year 1914.

Clearfield County has an area of 1,142 square miles, is divided into twenty boroughs and thirty townships, with a population of approximately 60,000, coming under the direct supervision of your County Medical Inspector.

During the year 343 reports of placarding (Forms-36) and 337 reports of disinfection (Form-37) were sent in by the fourteen health officers.

Of the thirty-five diseases requiring report to the Department of Health, this office had to do with but nine during the year, 433 cases being reported as follows:—

Measles,	152	Chicken pox,	11
Diphtheria,	142	Tuberculosis,	6
Typhoid fever,	44	Mumps,	5
Scarlet fever,	24	Smallpox,	3
Whooping cough,	33		

With the exception of smallpox no special investigations were made. On January 5th, I was called by Doctor McGirk with reference to a resident of Chester Hill, who had been visiting in Altoona at a house where smallpox was developing. He refused vaccination and the premises were placed under absolute quarantine for eighteen days.

On January 7th, a report reached me that a case of smallpox existed in Sandy Township. This case is interesting to me and the following represents in a manner the efficient work done by our State Board of Health. About December 20th, 1913, Mr. L. of DuBois, had been to Pittsburgh. After his return he had an eruption which was mistaken for chicken pox. He had a relative living in Sandy Township who had a child die. The child was brought to Mr. Logan's home in DuBois for burial. After the burial of the child the mother of the child went to Warren with a relative who had attended the funeral. On her return from Warren to Sandy Township she was taken with smallpox. She stated that the woman whom she had gone to Warren with was ill when she left. I got the address of the woman in Warren and wired the State Department of Health at Harrisburg and had the Warren case quarantined by eight o'clock on the same day. This was all done within less than nine hours from the time I received notice of the case in Sandy Township. I at once ordered absolute quarantine of the premises and deputized two physicians to vaccinate all contracts in Sandy Township and DuBois. Only one case occurred from contact with this patient.

January 11th, I was called by Doctor Miller to see a case suspected of being smallpox in Penn Township. A definite diagnosis could not be established. We, however, considered it an indeterminate case and placarded the premises for smallpox and established absolute quarantine. Ordered vaccination of all contacts and fumigation of school room where patient taught. Later this case proved to be a confluent smallpox.

In November, I made an investigation at Allport and Morrisdale where it was reported that an epidemic of diphtheria was threatened. Found no evidence of irregularities and the attending physician seemed to have his people in good control.

November 9th, I made an investigation of the Glen Richey school premises where ten cases of diphtheria had occurred. The school was closed and fumigated and ordered to be kept closed until the premises were put in a more sanitary condition.

Statistical Summary of the Work of the Year.

		Examined cases alleged to be:	
Forms 36 received,	343	Smallpox,	5
Forms 37 received,	337	Chicken pox,	12
Schools ordered closed,			1
Dairy farms inspected,			1
Miles traveled by railroad,			143

CLINTON COUNTY.

Dr. R. B. Watson, C. M. I. As County Medical Inspector of Clinton County, I respectfully submit the following as a summary of the sickness among the thirty-two thousand inhabitants of our county which came under my supervision in the year 1914.

Smallpox:—On February 4th, the attending physician of four cases of an eruptive fever which he had diagnosed to be smallpox, telephoned and asked me to go and see the cases with him and confirm his diagnosis, which I did, but could and did not agree with his diagnosis. They much to our satisfaction proved to be chicken pox and after hearing the history of the exposure, the character of the eruption and its development, &c., there could be no mistake.

On November 26th, the Health Board of Renovo sent for me to come up and see two suspected cases of smallpox. I went and found two brothers, one a fireman running between Renovo and Ridgway, the other an employee in the Renovo shops. The supposition was that this fireman had contracted the disease either at Kane or Ridgway,

as there was some smallpox at Kane at that time, and his brother contracted the disease from him. The Renovo Health Board promptly quarantined both houses putting a guard upon each. I vaccinated all the inmates of both houses and the local physician promised to see that all contacts were vaccinated and the disease was prevented from standing. These two cases were the only ones in our county in 1914.

Diphtheria:—We had twenty-six cases in various townships during the year. The death rate was low owing to the prompt use of antitoxin. Six of these cases occurring in Greene Township could be traced to a child coming home from Pine Creek where he had been exposed to the disease. In a few days after his arrival at home the disease was developed and five of his brothers and sisters contracted it from him.

Scarlet Fever:—Of this disease there were ten cases reported to the County Medical Inspector during the year, and most of these cases occurred in Porter and Lamar Townships.

Measles:—Measles also appeared in Porter and Lamar Townships with some cases in Pine Creek. I was not called to make an inspection in any of these cases. They were generally quarantined and the houses placarded, and the instructions of the Health Officer were pretty well obeyed.

Typhoid Fever:—There were only seven cases reported which was quite an improvement over 1913, just one-half as many.

Mumps:—We had nineteen cases of mumps but I feel satisfied there were quite a number of cases occurred that were not reported.

Chicken Pox:—We had nine cases reported in the county.

Summary of Diseases in Clinton County in 1914.

Forms 36 received,	129	Diseases—	
Forms 37 received,	112	Scarlet fever,	10
		Diphtheria,	26
		Typhoid fever,	7
		Chicken pox,	9
		Mumps,	19
		Measles,	24
		Smallpox,	2
		Erysipelas,	1

COLUMBIA COUNTY.

Dr. S. B. Arment, C. M. I. I have the honor of reporting the following summary report of Columbia County for the year 1914.

The year was ushered in with a comparative clean bill of health as there was no epidemic of any account left over from the year before.

It was soon evident, however, that, with the inhabitants living within doors, contagious diseases began to spread as evidenced by the reporting of over a hundred cases of contagious disease throughout the county by April 1st. with a subsidence in July, August and September, when they again began to multiply.

During the year three hundred and ten cases of contagious disease have been reported by the health officers doing work outside the borough, of which your county medical inspector diagnosed twenty-four, the most of them being chicken pox.

I would also state that two cases of Anthrax were inspected, one in Berwick and the other Catawissa. Details concerning each will be found among the special reports of the Medical Division. Of the above diseases, there were:—

Chicken pox,	18	Measles,	12
Scarlet fever,	36	German measles,	8
Whooping cough,	127	Diphtheria,	47
Pneumonia,	2	Typhoid fever,	7
Tuberculosis,	7	Mumps,	7
Tetanus,	1	Erysipelas,	3

Two hundred and twenty-four reports were received from the eight Health Officers of disinfections performed by them for these diseases.

Chicken Pox:—This disease was well scattered throughout the county, no one health officer reported any large number and almost every one reported one or more cases.

Scarlet Fever:—This was confined to the southern portion of the County and no case reported to your Medical Inspector on the northern side of the Susquehanna River.

Whooping Cough:—As usual this disease spread over the most of the county with the greater visitations in the lower and middle sections.

Pneumonia:—But two cases were reported, and they both occurred in the northern section of the county.

Tetanus:—The one case of this dread disease occurred in the lower section of the county.

Measles:—This year the visitation of this disease was very light as but twelve cases were reported.

Diphtheria:—Diphtheria was reported in forty-seven cases, many of them (twenty-three) in Conyngnam Township—quite a number in Hemlock, with six in Madison, and a few scattered over the rest of the county.

Typhoid Fever:—There would appear to be a great falling off in this disease. I am glad to be able to say this, as I believe that all rural cases were reported this year, and only seven cases in all.

Mumps:—Mumps has a record of seven cases scattered throughout the county.

Erysipelas:—Erysipelas has but three victims to its credit, all in the upper sections of the county.

Travel:—In the past year your inspector has traveled by rail fifty-two miles and forty-two miles by livery, with an expenditure of thirty-eight hours time used in traveling alone during the year.

Schools:—Two schools were requested to disinfect on account of scarlet fever in Locust Township.

CRAWFORD COUNTY.

Dr. J. K. Roberts, C. M. I. The medical inspection work of Crawford County for the year 1914 has been less than last year. There have been two hundred and ten cases of contagious diseases reported to me in 1914 and seven hundred and twelve in 1913.

The work in many respects is more satisfactory as the physicians throughout the county are helping to avoid epidemics by reporting their contagious diseases more promptly and otherwise cooperating with me in the work in helping to suppress disease.

There also has been less difficulty experienced by the Health Officers throughout the county in enforcing quarantine and less disposition on the part of those infected to keep the disease from being known and not to call a doctor to diagnose the case. This condition has improved not only in the country districts but also in the two cities and the boroughs in the county.

Smallpox:—This disease has caused more trouble than any other this year. There was an epidemic of this disease in Union City and some other parts of Erie County in the first part of the year which caused a few cases to develop in the adjoining townships of Cambridge, Bloomfield, and Sparta, and in the last part of the year there was an epidemic in Jamestown, Mercer County, which caused two cases to develop in West Fallowfield Township, also one case in West Mead Township. All these cases were carefully quarantined and contacts hunted up and vaccinated with the result that the disease was kept under control. There were nine different homes quarantined in five different townships in the county with nineteen cases which shows the good results of quarantine and vaccination.

Typhoid Fever:—The epidemic of typhoid fever in the small borough of Hydetown in the eastern part of Crawford County was referred to me by the Department for investigation. I visited all the premises infected made out census cards for each and forwarded

them to the Department. I found the general sanitary conditions of this Borough to be bad. They were corrected and the disease stopped, no other cases developing after my visit. I concluded that flies had spread the disease, the first case having been infected outside of the Borough and the other infections coming from this one. The first case had not been reported and quarantined, and, therefore, the discharges were not properly taken care of.

This was the only epidemic of typhoid fever in the county this year, the other cases being scattered throughout the rural districts. It was difficult to trace the origin in most cases.

Diphtheria:—There was a small epidemic of diphtheria in one of the school districts of Venango Township resulting in ten cases and two deaths. This was caused by a child visiting in this vicinity from Erie City, who had this disease but without diagnosis or quarantine. The other infectious diseases reported to me have been as a rule mild in character and with the quarantine restrictions which were properly enforced were kept under control and the spread of the disease prevented.

Statistical Summary of Work Done in Crawford County in 1914.

Forms No. 37 received,	199	Cases examined alleged to be:	
Forms No. 36 received,	210	Measles,	2
		Mumps,	2
Dairies inspected for:		Typhoid fever,	2
Smallpox,	5	Scarlet fever,	1
Typhoid fever,	4	Chicken pox,	8
Diphtheria,	4	Smallpox,	14
		Diphtheria,	3

Inspection of smallpox before lifting quarantine, 7.

CUMBERLAND COUNTY.

Dr. H. B. Bashore, C. M. I. Cumberland County has an area of about five hundred and thirty square miles and is divided into twelve boroughs and eighteen townships. According to the census of 1910, the County has a population of 54,479. The boroughs contain about 27,000, leaving a township population of 27,000, which is directly under the supervision of the County Medical Inspector.

During the year I visited every township, except one, and traveled 1,243 miles by rail and 461 miles by team. During the year I received 134 reports of communicable diseases, and 118 reports of disinfection. Of the reported diseases I had to do with the following:

Chicken Pox:—Thirty-two cases were reported by physicians and parents during the year. There is still considerable tendency for the parents to secrete cases of this disease, although they almost invariably keep them out of school.

Diphtheria:—This disease appeared in almost every township with a total of twenty-two cases. There was no suggestion of an epidemic, but only isolated cases cropping out from time to time. When a case appears in a school, your Inspector makes it a rule to visit this school and examine the throats of all the pupils, eliminating, of course, any suspicious cases. By this method the danger of an outbreak is diminished and school work is not interrupted by subsequent closing of the school.

Measles:—During the year twenty-one cases of this disease were reported, occurring only as isolated cases. It is quite likely that in very many of these cases the parents do not employ a doctor and the case is not reported, but the sick one is always kept out of school.

Mumps:—Only five cases reported during the year.

Scarlet Fever:—Three cases reported during the entire year, occurring in widely separated districts and having no intercourse with each other.

Typhoid Fever:—Fourteen cases were reported during the year. About half of these cases occurred in Penn township, in a little mountain settlement known as Brushtown. It seemed as though there might be a wide spread epidemic in this locality, but the people very readily accepted advice and began using boiled water for drinking purposes, with the result that the disease failed to spread. The nurse of the Huntsdale Visiting Nurse Association visited all the families of the sick and demonstrated her efficiency, with the result that there was not one "secondary" case, although sanitary conditions were very poor. A visiting nurse in a rural community like this does a great deal of good.

Whooping Cough:—Twelve cases reported in various places in the County. I feel certain that there are still a certain number of cases of this disease not seen by a doctor and, of course, not reported.

Dairy Farm Inspections:—During the year I inspected twelve dairy farms on account of the presence of scarlet fever, typhoid fever, and diphtheria. On five farms the sale of milk was discontinued, as the owners were unable to take the precautionary measures required by the Department. On the other seven farms, arrangements were made for a neighbor to do the milking and market the milk.

DAUPHIN COUNTY.

Dr. C. R. Phillips, C. M. I. During the year 1914 there were 428 cases of communicable diseases reported to the County Medical Inspector. Of these cases 197 occurred in small epidemics of various diseases in different parts of the county, well distributed as to time, throughout the year.

In March there were seventeen cases of scarlet fever in Upper Paxton township, which from the letter file of Dr. Paul A. Hartman, whom I succeeded March 2 as County Medical Inspector, I am inclined to believe developed from a daughter of a Mr. M.——— who suffered from the disease while on a visit to Philadelphia and who returned home after an absence of nine weeks. Shortly after her return six other members of the family developed the disease.

In January there was a small epidemic of measles in Susquehanna township, thirty-seven cases being reported.

Running steadily through July, August, and September into October there was an epidemic of typhoid fever in Derry township in the towns of Derry Church and Hershey. Of this epidemic I shall make further report. There were in all forty cases.

Susquehanna township had forty-four cases of diphtheria in the fall and early winter, and Derry had two periods of infection, one of ten cases in March and another of nine cases in September.

I am reporting these 197 cases in this particular way because it seems to me that they point to a disregard of quarantine regulations and to carelessness as to early diagnosis and prompt isolation of cases.

By direction of the Department I went to Hershey Tuesday evening, March 17th, to see a patient of Dr. H. Found a young man, aged seventeen, with a papular eruption over face, chest, upper arms and thighs. Discrete, superficial, no tendency to vesiculation or postulation. Patient not sick. Excluded variola, varioloid, and varicella. Diagnosis erythema papulatum confirmed by Dr. C. J. Hunt, Associate Chief Medical Inspector.

Typhoid Fever:—August 1st, upon information of a case of typhoid fever on the milk farm of J. M. D., near Deodate, Conewago township, I made investigation. Arranged as the Department always insists shall be done, that the person doing the milking and attending to the milking utensils, should take an antiseptic bath and move out of the house, and that she should live outside the quarantined premises until quarantine was removed. Such an arrangement was made with a daughter of the patient.

On September 20th, I went to the S. dairy farm, in Hummelstown, to quarantine for typhoid fever and establish quarantine regulations. Found that farmer was unwilling to arrange for milking and butter making as laid down in the quarantine regulations of the Department. Said he would prefer to feed the milk to the hogs and only make enough butter for his family during the quarantine. We pointed out that even then he was exposing his family to danger of infection. His remark, "The Lord is able to take care of us. I have full confidence in Him," was decidedly at variance with his next words, which were a request that we take a sample of the well water "To see if there was any fever in it."

During July and September, an excess of typhoid fever occurred in Derry township. I made investigation on August 5th, studying fifteen cases, and during October and early November, studying twenty-five. A report of one of these two outbreaks may be found among the Special Reports of the Division of Medical Inspection.

Diphtheria:—February 24th, Dr. Hartman, C. M. I., deputized Dr. C. J. B. Flowers, of Harrisburg, to examine some alleged cases of measles at Hershey. This he did and while there learned of several cases of diphtheria at Cassidy's quarries, between Derry Church and Palmyra. He investigated and found a deplorable condition of affairs. In one "shanty" he found sixteen men with the man who was suffering from diphtheria. These men were working, going from one 'shanty' to another, and visiting Palmyra without "let or hindrance." The patient was isolated, quarantine was explained to the men, and the Superintendent of the quarries gave assurance that all instructions would be carried out.

When quarantine time had elapsed, the bedding was burned and the provisions for sanitary cleaning, Form 18, were carried out, as it was deemed impossible to disinfect by ordinary methods because of the cracks in the building.

On September 26th, received notice of death from diphtheria of Jonas H., infant son of Charles H., of Picketown, Hanover township. The same mail brought Form 36, regarding this disease. Investigation showed that Health Officer Allwine had received notice of case and death same day; that he had instituted quarantine and had stopped the sale of butter from the premises. I gave full instructions as to quarantine requirements. Harry S. P., farm hand, arranged to sleep in the barn, take his meals at the home of a neighboring farmer and care for the milking and making of butter. Under these conditions sale was resumed in due time.

During the fall and early winter there was a succession of cases of diphtheria in the Pleasantview school. It was unquestionably a condition of school infection. We closed the schools one week, with the result that the number of cases immediately lessened only

to increase again, however, upon the opening of the schools. A week before the Christmas holidays we closed the schools again, disinfected all the rooms from which pupils with the disease had been taken and kept the schools closed sixteen days, with the result that the epidemic was wiped out.

German Measles:—On March 18th, at the request of Dr. Hottenstein, of Millersburg, I investigated with him five cases of German measles in adults. Three of the physicians of Millersburg concurred in the diagnosis. These patients had not been sick and in each case had consulted a physician because of the rash which was annoying to them. Two of the cases had enlarged postauricular lymph nodes on the upper part of the mastoid process. Four of these patients worked in one of the factories of the town. Quarantine was ordered. Several days later, we were informed that the quarantined patients were at work. Investigation proved information to be correct. Attention of the local Health authorities was drawn to the condition and the factory ordered closed until disinfected and the patients strictly quarantined until expiration of quarantine period. These regulations were carried out at once.

Scarlet Fever:—On April 30th, at the request of the Department, I went to Pillow to investigate rumored unreported cases of scarlet fever. I found that two physicians from a neighboring county had been attending cases with sore throat and a rash in a number of families in Pillow. In some of the families I found children in the stage of desquamation from scarlet fever. In some cases two and three children to the family. There had been a death from post-scarlatinal nephritis. My information was that the cases started from an unreported case in the K. family living with Mr. H. in Pillow. One of the members of the family, while suffering from the disease worked in the shirt factory of the town.

The factory and school were ordered disinfected. The Secretary of the local Board of Health promised to disinfect all the premises where suspicious cases had existed.

The conditions as found were reported to the State Department of Health.

Statistical Summary of Work Performed During the Year 1914.

Forms 34 received,	440	Examined cases alleged to be:—	
Forms 36 received,	428	Smallpox,	3
Forms 37 received,	302	Typhoid fever,	33
		Diphtheria,	27
		Cerebrospinal meningitis,	2
Dairies inspected for:—		Tuberculous meningitis,	2
Typhoid fever,	5		
Diphtheria,	4		

Stopped sale of milk on two premises.
Stock transferred on two premises.

DELAWARE COUNTY.

Dr. Hiram M. Hiller, C. M. I. We can again report a decrease in the number of contagious diseases from Delaware county, as will be seen from our summary; we had but one hundred and ninety-five compared with three hundred and three in 1913.

Diphtheria.—There were thirty cases of diphtheria. Of this number twenty were from the Boys' School at Glen Mills. The cases appeared in several different cottages and occasioned some difficulty in tracing the source of the contagion. There were about eight hundred and fifty boys in the school and the rigid quarantine and careful methods employed by the school authorities prevented any occurrence of contact cases. Eventually the food supply was suspected and carriers sought for among those pupils distributing the food.

By prolongation of the isolation period of the convalescents and their further segregation, the outbreak was ended with only twenty cases. Dr. Wm. Wood was asked to assist the school physician in his efforts to control the outbreak and the following is a summary of his report:

"The infection originally appeared about the last week in September, being imported to the school through contact from Upper Darby. The first case occurred about the first of October and since then, there has arisen on an average a new case every ten days. The total number of cases up to the 15th of November is twenty. Of these twenty, ten are in quarantine, the other ten having been released at the expiration of the quarantine period. The last case occurred on the 15th of November. These ten cases are isolated in the Hospital with a nurse in charge, who is also isolated, and careful disinfection of linen, remnants of food, tableware, etc., is being carried out. There was no source of contact discovered with the isolated cases.

"In addition to this, Dr. Hollingsworth, who is in charge, has caused to be sent into another Department in the Hospital, all throat cases which are studied and cultured. The ten cases released at the expiration of the quarantine period were not studied culturally.

"I have made the following suggestions: That these ten cases released and any other occupant who has had diphtheria in the last six months be segregated in a cottage and not allowed to attend school or any other place where the remainder of the boys congregate, that they be segregated for at least two weeks, after which time cultures be made and the negative ones released. Also that the cases released from quarantine be segregated for two weeks longer from these other boys and released on negative cultures.

"I have requested the Doctor to chart the cases and to remove any boy from contact with the food supply, including the dairy, if such boy be among those having had diphtheria within the last six months, and also advised that none of the boys infected be allowed to come in contact with the food supply for an extended period of time."

In May I received a card from one of the Philadelphia hospitals reporting nasal diphtheria in a child, with the address, "Darby Creek, near West Chester," neither township nor county being given. The following excerpt from my letter of May 29th gives the further history of the case.

"I enclose the correspondence relative to the inspection of nasal diphtheria, reported from Drexel Home, in Philadelphia to you, via Board of Health of Philadelphia and back to me by the way of Health Officer Moorhead.

"As I wrote you, Darby Creek is at the minimum twelve miles from West Chester, but I felt that this case must be near the crossing of Darby Creek and the West Chester Turnpike. As such, it proved to be, the parent being C. F., who works in the saw mill at the above mentioned place. The father was perfectly frank in giving me the complete history of the case. They did not think it was diphtheria, so took it to Dr. I. B. Roberts, of Llanerch, who diagnosed foreign body in the nose, but was unable to remove it. He in turn sent it to the Children's Hospital, in Philadelphia, but they referred it back to Dr. Moore, Llanerch, who is on the staff at the Children's Hospital. He, as you will see by this letter, removed a piece of paper from the child's nostril and thus ended the case."

Chicken Pox:—There were thirty-two cases of chicken pox and sixteen of these occurred in the Sandy Bank School, Upper Providence township. The health officer reported a number of cases out of school on account of this disease and in only one case had a doctor been seen to verify the diagnosis. I sent the following letter to the secretary of the school board for Upper Providence.

"I had Dr. J. Wm. Wood, of Chester, inspect all of these cases of alleged chicken pox, who had been out of the Sandy Bank school on account of illness during the last month. He has confirmed the diagnosis in every case and none of these children can legally return to school until their premises are disinfected. Some of these children have been allowed to return already but they will be excluded from this date until the health laws are complied with."

No further cases occurred after the premises and school were disinfected.

Smallpox:—We had but one case of smallpox this year, a colored man, R. H., escaped from quarantine, unvaccinated, after being exposed to smallpox in Cincinnati, about the middle of May. He

beat his way on freight trains to Cleveland, Buffalo, Allentown, and Bethlehem, before he came to Chester. Here the fever and pustules developed and he went to the office of Dr. Thomas who diagnosed the case and notified this office. As he was a tramp without a home or any means of support, it became our duty to arrange for his care and with the consent of the State Quarantine Board, he was removed to Marcus Hook, where he recovered without incident, and no other cases developed from exposure to him.

We examined one case suspected of having smallpox but established the diagnosis of a pustular dermatitis resembling the drug rashes, but of unknown origin.

Measles:—There were sixty-four cases of measles reported to this office. There were nineteen cases in the Boys' Department of the Glen Mills School, but the prompt isolation of suspects and prohibition of general gatherings soon brought the outbreak to an end.

Frequently the cases are mild in character and in the country districts the doctors are not called, with the result that the children return to school as soon as the rash disappears, without disinfection or adequate quarantine. The following letter illustrating such a case was sent to the Health Officer for Bethel township.

"I have just learned that there is one case, if not two or three cases, of measles at the home of H. T., living in Bethel township. Will you please go to this place on Monday and ascertain the facts in regard to the report. If you find that the hired man first, and then later one or more of his children have had what they think is measles, and they have had no doctor, you will please let me know and I will confirm this diagnosis. We do not want a repetition of the occurrence at Booth Corner school.

"While you are in that neighborhood, please visit the school that is situated about half way between Chelsea and Booth Corner, and find out from the teacher how many pupils she has had absent with what she supposed was measles. I am told that out of about twenty-one pupils, she had about twenty absentees."

After having the Health Officer's report I sent you the following letter.

"Yesterday I went to No. 1 School, Bethel township, and ascertained that they had had seventeen absentees on account of measles, three pupils had stayed out because of fear of getting the measles, and only one pupil attended school for a whole week. There was no doctor in any case and all were readmitted without certificates.

"I met the secretary of the school board, who was then visiting the school and we had a very long heart to heart talk. The school board realizes the importance of the situation and are perfectly willing to cooperate with us and are going to endeavor to bring the farmers to a thorough realization of the situation."

When we came to investigate further, we were told by the parents of these children that at times quarantine was not lifted promptly and in some cases not at all, and for that reason they avoided calling a doctor. Our Health Officers replied that they could not disinfect until they had orders from the doctors, and the doctors informed us that they often never saw minor illnesses except the one time when they reported them. To obviate this complicated situation, the following letter was sent to our health officers:

"I have the Commissioner's sanction to issue the following instructions to you in order to obviate the difficulty which is constantly arising as to the raising of quarantine in cases where you have no notice from the doctor in charge that the case is concluded, and where the period of quarantine has expired. It has unfortunately occurred that in such cases the placard remains unremoved until the wind and rain destroy it and the children wander back to school without disinfection.

"There can be no blame attached to the attending physician in certain of these cases, for the reason that he may have only seen the case but the one time when the diagnosis was made, and no one pays him to return at the expiration of the quarantine period to ascertain if there be new cases or if the child has fully recovered.

"Therefore, you are hereby instructed, in all cases in which your records in the Health Officer memorandum indicate that it is time to disinfect a case of contagious disease, you will if possible get in communication with the physician, who has reported the case, by telephone in order to save time, by letter if this is impossible, inquiring from him if the case is ready for disinfection. If he has no knowledge of the case further than to have first notified you, it will be your duty to notify this office, so that a record of the case may be obtained, and you will then be instructed to proceed to the premises. If you find no further cases have occurred and in your judgment it is safe to do so, you will be instructed by the County Medical Inspector to raise quarantine and issue school permits. I wish in this way to make it obligatory to have Health Officer's permits before children can go back to school, but unless we are prompt in our disinfections we cannot consistently hold parents responsible, if in their eagerness to get their children back to school they infringe the quarantine laws."

Scarlet Fever:—We had five cases of scarlet fever reported and one that was transported to Philadelphia, where it was sent to the Municipal Hospital and reported from there. We were unable to establish criminal negligence in this instance and did not prosecute the offender although the offence was grave and there were strong suspicions that the parents had transferred the patient to Philadelphia with full knowledge that they were doing so in defiance of the Boards of Health.

Typhoid Fever:—We had thirteen cases of typhoid fever reported to this office. This does not include the cases comprised in the special reports on the outbreaks in the borough of Marcus Hook, and at Drexel Hill in Upper Darby township.

As our cases occurred sporadically and in all parts of the county, we were not able to trace the origin of the infection, and none of them caused us any difficulty in the matter of quarantine.

The Marcus Hook outbreak amounted to half a dozen cases before it was called to our attention, and there were in all sixteen cases reported to various Boards of Health between April 21st and July 1st, all emanating from this one source.

It was ascertained that G., the retail milkman, was obtaining his milk supply from the dairy farm which we had occasion to inspect last year when Chester had a large number of typhoid fever cases. By stopping this milk supply we had no more typhoid after the anticipated incubation period had expired. The last case reported was in the person of the local milk dealer himself.

Repeated efforts were made to find the carrier on this dairy farm, but no satisfactory data were obtained from either stools or urine, although one young woman, who was never known to have had the disease, gave a positive Widal reaction at each examination.

Statistical Summary of Contagious Diseases Reported During the Year of 1914.

Diphtheria,	30	Mumps,	13
Chicken pox,	32	Whooping cough,	23
Smallpox,	0	Erysipelas,	2
Measles,	64	German measles,	10
Scarlet fever,	5	Pneumonia,	1
Typhoid fever,	13		
Tuberculosis,	13	Total,	195
Forms 36 received,	195	Number of dairy farms inspected for	
Forms 37 received,	202	Measles,	2
		Typhoid fever,	8

BLK COUNTY.

Dr. J. G. Flynn, C. M. I. On March 19th, at the request of E. W. Mosey, Health Officer, District 441, I took charge of an epidemic of scarlet fever in neighborhood of Byrnedale. Nine families were affected before complete control was obtained.

On September 15th, the superintendent of Johnsonburg Water Company complained of contamination from outbuildings of farms on headwaters of Powers Run, from which stream the Borough obtains

part of water supply. This is located in Benzinger Township. Went there by automobile, sixteen miles, and investigated and had them correct the conditions, making report to Commissioner.

October. Had a considerable outbreak of scarlet fever in Ridgway Borough and Ridgway Township. It was so extensive that I was compelled to close Borough, Township, and Parochial Schools, besides churches, Sunday Schools and places of amusement. These were kept closed for six weeks before the epidemic was under control.

Oct. 29th. At the request of E. W. Mosey, Health Officer, District 441, and the School Board of Jay Township, I took charge of an epidemic of scarlet fever in the neighborhood of Byrnedale. Ten families were quarantined; schools and churches were closed for short time to control its spread.

Nov. 11th. At the request of R. G. Metts, Health Officer, District 435, I took charge of an epidemic of mumps in the village of Arroyo, where no physician is located. I closed schools for several days and had them thoroughly fumigated.

Dec. 18th. At the special request of the Ridgway Borough Board of Health I examined and vaccinated a family coming from Kane, where they had lived in the house with smallpox and had been exposed to it. I was compelled to isolate this family in the house of friends where they were visiting and to quarantine and place guards on the house. I kept them isolated and visited them daily during the period prescribed by rules of State Board, but fortunately vaccination was successful and no outbreak occurred.

ERIE COUNTY.

Dr. J. W. Wright, C. M. I. I have the honor to submit the following report of my work as County Medical Inspector of Erie County, for the year 1914.

Erie County has an area of 772 square miles, of which about 750 are rural. There are two third-class cities with a population of about eighty-two thousand inhabitants, fifteen borough with approximately fifteen thousand people living therein and a rural population of about thirty thousand which is divided among twenty-two townships. Active Boards of Health are existent in both the cities and in four or five boroughs. In three boroughs the township Health Officer acts as Borough Health Officer but in the remainder of the boroughs little or no attempt is made to look after health affairs in any way.

Communicable diseases to the number of four hundred fifty-six occurred in twenty of our twenty-one townships. These have been taken up under their respective headings as follows:

Four hundred cases of smallpox were reported in the cities of Corry and Erie, the boroughs of North East and Union City, and eleven townships. Of these, by far the greater number occurred in the Borough of North East; a brief history of this outbreak is given among the special reports of the Medical Division.

One hundred and five cases of chicken pox were called to my attention in fourteen townships. There were also numerous cases of this disease in the City of Erie and in the City of Corry, and three in the Borough of Girard. All rural cases were checked up because of the prevalence of smallpox.

Fifty-seven cases of whooping cough were reported from seven townships. This ailment was also prevalent in the City of Erie. It also appeared in the Borough of Platea, one case being reported therefrom.

Forty-one cases of scarlet fever in thirteen townships, also one in the Borough of Platea, were reported by the Township Health Officers having charge of those districts.

Twenty-two cases of measles were noted in eleven townships and two boroughs. Twenty-four cases of diphtheria developed in ten townships, twenty cases of mumps in eight townships, and five cases of erysipelas in three townships.

Twenty cases of typhoid fever were reported from eight townships, in connection with which I would say that one-half, or ten, of this number occurred in that part of Millcreek township adjacent to the City of Erie. Investigations were made in each of these instances with a view to ascertaining the source of infection. In several it was found to be the local water supply; in others, however, the source could not be discovered.

One case of poliomyelitis was reported, the details of which were gone into with a great deal of care. No definite source of infection was, however, ascertained. The case developed in the month of August. The patient lived on a farm and had not been away from home during the whole summer, nor had he been visited by anyone outside of his immediate relatives or near neighbors. His residence was situated on one of four corners of a much traveled highway and he had been engaged in farm work on his own premises.

This was the only case of this disease reported to me during the year, with the exception of one case in the City of Erie, which was that of a child who had recently removed to that city from Buffalo. His removal to Erie had occurred within the incubation period of the disease and it is probable that the ailment had been acquired in the former city.

In addition to the work above referred to, I visited the town of Warren, Warren County, to determine the nature of an eruptive disease existent in that place and, in conjunction with the County Medical Inspector, visited several persons afflicted therewith. In each of these cases, Dr Schmehl's diagnosis of smallpox was confirmed.

An outbreak of what was popularly called sore throat occurred in Springfield township in January. An inspection of the cases and an examination of smears therefrom showed the disease to be diphtheria.

Numerous complaints have been made to me regarding insanitary conditions existing at Waldameer Park and vicinity, the location being in Millcreek township, about four miles west of the limits of the City of Erie. The shore in this section is occupied in the summer months by campers who live in tents, shacks, cottages, and, in some instances, rather elaborately constructed bungalows.

The water supply is obtained from wells and springs in the neighborhood. Garbage is disposed of in a primitive fashion, being dumped out on the ground and left to rot on the surface, partially burned, or, in a few instances, thrown into shallow pits. Toilet accommodations are outdoor privies, which are open to flies and vermin of all kinds. I have already referred this matter to the Engineering Division of the State Department of Health, and I believe they have the matter in hand. In addition to this, the water from a number of wells and springs has been examined bacteriologically and when found to be unfit for drinking purposes, condemned.

In the month of May, Mr. J. A. A. Le Prince, a sanitary expert connected with the United States Public Health Service came to this City for the purpose of making a survey of Presque Isle Peninsula and the lake shore adjacent thereto, with the view of eliminating our mosquito nuisance in this vicinity during the summer months. Mr. Le Prince found many places where this insect was breeding and among other varieties found many larvae of the Anopheles. He stated, however, that he failed to find any live mosquitos of this variety. The location of the principal breeding place of this variety of this insect was on the farm owned by A. C. Kelso, just west of the Waldameer Park, above referred to, and one on which a large number of campers have their quarters located. I have interviewed Mr. Kelso with a view of having him drain or fill in the ponds on his premises, but he, however, is averse to taking any action in the matter. It would seem that he should be forced to eliminate these ponds at an early date during the coming year.

With reference to the B. & L. E. Traction Company, which owns Waldameer Park, I would say that, acting on the suggestion of Mr. Le Prince, they established several drains communicating with ponds

on their premises; they also removed a large quantity of brush and rushes and did a great deal toward placing their property in a condition unfavorable to the breeding of mosquitoes.

I have referred the matter of insanitary conditions on the Kelso Farm to the Engineering Division of the Department for action.

FAYETTE COUNTY.

Dr. O. R. Altman, C. M. I. Fayette County during the year 1914 recorded 1,222 cases of reportable diseases, returned by the twelve Health Officers, who represent twenty-four districts. Of these, 658 were of the form of contagious diseases generally considered notably dangerous to life; that is, scarlet fever, typhoid fever, and diphtheria.

Typhoid Fever:—One noticeable thing in the reports of 1914 is the number of cases of typhoid fever; there being two hundred and ten cases reported as compared to three hundred and four cases for the year 1913. During the year 1914 it was not necessary to make a single inspection for typhoid fever; there was no epidemic and the cases were widely scattered.

This can be partially explained in this way: the H. C. Frick Coke Company have made a special effort to do away with all springs and wells. This was done after the water had been analyzed several times, and in nine-tenths of these examinations the springs and wells were found to be infected with colon bacilli. At the same time the Trotter Water Company, whose water lines are distributed throughout the County, has been furnishing water to the greater part of the coal towns, as well as to a number of boroughs. This Company has been treating the water and has taken particular pains to keep their reservoirs and lines in first-class condition.

Scarlet Fever:—Two hundred and thirty-seven cases of scarlet fever were reported. Seventeen inspections were made. The first inspection was made January 15th, by order of the Department, at the Uniontown Hospital, where two nurses had contracted the disease from a child that had been accidentally sent to the Hospital from near Republic, Menallen township.

February 14th an inspection was made at the home of John Zacchi, Shamrock Works, Menallen township. Four cases were found in this family, one having died the day before.

February 19th an inspection was made at the home of Hazel Lytle, Gallatin, Nicholson township. They had previously lost two children, and there were two other cases in the family.

May 29th an inspection was made at Uledi, South Union township, where they had a small epidemic of scarlet fever with about thirty cases which have been reported in full to the Department. On June 2nd, the second inspection was made at Uledi, and on June 26th the third inspection.

July 16th, 17th and 18th inspections were made at Filbert Works, where they had a severe type of scarlet fever. A number of families were suffering from the disease and no physician had been called. Several children died and some twenty cases were found and quarantined during these inspections. In all, over one hundred families were visited. The Frick Coke Company placed the town under strict quarantine and put guards on duty, who were in charge until the disease was finally controlled.

Other inspections were made at Filbert Works during this epidemic, on August 7th, 12th, and 25th; also on September 17th and 21st.

August 29th, the Frick Company at Lemont Furnace, North Union township, notified me that several children were sick and that they suspected scarlet fever. On investigation, eight children were found suffering from scarlet fever in the homes of Pete Semanchick, Guy Weidmeyer, and Joe Kernoszak.

September 14th, an inspection was made at Mt. Braddock, North Union township, where Laura Fullmer was found suffering from scarlet fever, and on investigation it was found she had left House No. 12, Filbert Works, late at night, jumping the quarantine.

October 12th, by request of the School Board an inspection was made at the homes of James Jenkins, Smithfield, and Philip Saylor of Ruble Mills, Springfield township. Each of these families had scarlet fever; there being two cases in the Jenkins family and one in the Philip Saylor family. These inspections were reported in full to the Department.

Diphtheria:—One hundred and eleven cases of diphtheria were reported for the year 1914 as compared with two hundred and forty-two cases for the year 1913. Two inspections were made.

The first inspection was made May 29th. A case of diphtheria was reported at Uledi. This was in the same district and practically in the very house where another case was quarantined for scarlet fever. The diphtheria was associated with scarlet fever consequently the placard was not changed at that time, and I have my serious doubts whether there was any diphtheria present.

The second inspection was made September 29th., and was reported in full on October 5th.

Smallpox:—Two cases of smallpox were reported for the year 1914.

January 6th, I was called in consultation with Dr. W. W. Warren, of Dunbar, to a small coal town between Dunbar and Connellsville. Found Frank Kenish suffering from a well developed case of smallpox. This case was found recently to have returned from New Kensington and from the same district where several cases of smallpox were under quarantine.

On February 16th and 19th, Davidson Works near Connellsville was visited, where William Brown, a colored man, was found in an old deserted coke oven suffering with smallpox. This patient was placed in an isolated building in the outskirts of Connellsville and properly taken care of; detailed reports were sent to the Department on the succeeding days.

On January 7th, an inspection was made in consultation with Dr. L. N. Reichard, of Brownsville, to see J. Johnson. This was a suspected case of smallpox and proved to be chicken pox. A second inspection was made in this case on January 9th as I thought it best to be absolutely sure of the diagnosis.

On February 10th, was called in consultation with Dr. Ritenour, of Uniontown, to see a suspected case of smallpox in the home of O. B. Wassaw, Berklet St., Uniontown. This case proved to be a case of chicken pox.

December 15 and 16, I investigated a suspected case of smallpox at No. 14 Penn Street, Uniontown, reported by Dr. Whitson, colored. After two visits to this man a positive diagnosis of chicken pox was made and the case looked after accordingly.

Whooping Cough:—A hundred and eighty-three cases of whooping cough were reported for the year 1914 as compared with a hundred and forty-four cases for the year 1913. The majority of these cases were reported from two districts, there being a hundred and eleven cases reported by Health Officers A. M. Provance and Casper Haut.

One inspection was made on January 7th at Bitner Works, Franklin township, in the district of Casper Haut. In this small coal town between thirty and forty cases of whooping cough were found, this only being a portion of the cases as reported later.

Measles:—The County was peculiarly free from measles throughout the year as compared to the year 1913. A hundred and fifty-seven cases were reported for the year 1914 as compared with nearly twelve hundred (1,181) for the year 1913. These cases were widely scattered, two-thirds of them being reported from two districts under the supervision of Health Officers Frank Costello and John Hostetler.

Mumps:—A hundred and eighty-eight cases of mumps were reported for the year 1914 as compared with sixty-five cases for the year 1913. These cases were reported from nine districts, two districts having one hundred and seven cases.

Erysipelas:—Ten cases of erysipelas were reported for the year 1914, one less than the year 1913; there being eleven cases reported in that year.

Summary of Inspection Work for the Years 1913 and 1914 follows:

	1913	1914
Forms 37 received during year from Health Officers,	1,692	1,012
Forms 36 received during year from Health Officers,	2,115	1,164
Total time consumed in work for the Medical Division, hours,	395½	260½
Schools ordered closed during the year,	14	5
Distance traveled by street car, miles,	297	234
Distance traveled by livery, miles,	198	236
Distance traveled by train, miles,	40	42
Distance walked, miles,	32½	19
Health Officers instructed in office during year,	32	19
Health Officers instructed by phone,	40	41

Following is a short review of work of Health Officers of Fayette County; it having twenty-four townships, which are divided into districts, each of the twelve districts being in charge of a Health Officer. There have been reported through Health Officers the following cases:

	1913	1914		1913	1914
Measles,	1,181	157	Cerebrospinal meningitis,	4	3
Typhoid fever,	304	210	Pulmonary tuberculosis	39	38
Scarlet fever,	140	237	Pneumonia,	6	5
Diphtheria,	242	111	Smallpox,	1	2
Mumps,	65	188	Tetanus,	0	1
Whooping cough,	140	183	Impetigo Contagiosa,	0	1
Chicken pox,	60	72	Not listed,	0	4
Erysipelas,	11	10			

FOREST COUNTY.

Dr. T. J. Bovard, C. M. I. During the first half of 1914 Forest County had but few cases of communicable diseases.

In June there were reported several cases of measles in Jenks Township. July and August had a few unreported cases. At the beginning of school there was a rapid increase in the number. There was a quite general disregard of the Health Law in Jenks Township, both as to the report of cases and as to the observance of quarantine regulations later. Except for a few cases under the care of physicians there were no reports made. At this time the prolonged sickness of the health officer further complicated the situation. There is very little inter-communication between that end of the county and the western end and no direct railroad route.

I personally inspected the condition of affairs on September 19th. I visited and reported about fifty cases of measles and ordered the schools closed. More cases developed and a report of laxity in the

observance of the quarantine regulations caused me again to visit Marionville on the 22d, and I then reported about twenty-five new cases. Although these cases had not been reported there seemed to be more a listless disregard or ignorance of their duty than any objection or antagonism to the inspection or quarantine. Churches and a tent "movie" were closed at this time. After this the epidemic subsided rapidly.

One other inspection was made at West Hickory in December in response to the complaint that there were several cases of unreported chicken pox. One was found and placarded.

Otherwise conditions have been healthful. Nuisances reported were corrected by the health officer without further recourse.

FRANKLIN COUNTY.

Dr. H. X. Bonbrake, C. M. I. and Dr. Paul Allen, Acting C. M. I. I assisted Dr. Bonbrake in the duties of County Medical Inspector and at his death, November 22, succeeded him as Acting County Medical Inspector.

Of the thirty-five communicable diseases requiring report to the Department of Health, only eight were brought to the attention of this office, a total of four hundred and sixty cases being reported during the year. The six district health officers sent in two hundred and nineteen reports of placarding and two hundred and seventeen reports of disinfection.

In making the necessary investigations throughout the county it was necessary to travel about eight hundred miles by railroad and seven hundred miles by livery.

Typhoid Fever.—Ninety-six cases were reported during the year. Thirty-six dairy farms were inspected on account of the existence of typhoid; four in Montgomery, five in Greene, five in Guilford, two in Washington, seven in Antrim, seven in St. Thomas, three in Letterkenny, two in Hamilton, and one in Lurgan Township. On twenty-four of these farms the sale of milk was temporarily discontinued, on the remaining eleven arrangements being made to carry out the Department's rules and regulations concerning the handling and sale of milk from such premises

In Greene Township seven cases occurred on one farm, two on an adjoining farm. The water supplies on these two farms, also that at Red Bridge Park, were examined at the laboratory and found to be grossly polluted. People were urged to boil all water used

for domestic purposes, and where surrounding surface conditions warranted it, to have the wells thoroughly disinfected with lime.

In several instances there was a history of former typhoid on the premises, but for the most part the cases were scattered and no particular source of infection could be determined.

Diphtheria: Sixty-four cases were reported. Twenty-five special investigations were made on account of the existence of diphtheria in Montgomery, Letterkenny, Hamiltonban, Guilford, Antrim, Quincy, and Lurgan townships, eighteen of which were on dairy farms. On ten of these farms the sale of milk was discontinued, on all others arrangements being made for the milk to be handled by persons living outside the infected premises, or by transferring the stock to other premises. Eight schools were closed on account of threatened outbreaks where children were taken ill while in school. In every instance where schools were closed, disinfection was ordered before reopening.

In November an outbreak was investigated in Chambersburg. Schools were closed and it was recommended that all children be examined and that all who had previously had sore throat be medically certified as free from infection before returning to school.

In December a second investigation was made in Montgomery township. Twenty-one pupils were examined who gave a history of previous sore throat. The quarantine period had expired in many of these cases and the health officer was instructed to disinfect all such premises.

During December a widespread outbreak occurred in Letterkenny township. The source of infection was traced to a case which had occurred during the previous summer and was not properly diagnosed, until after patient had been removed to her home in Chambersburg. Later several contacts of this case contracted sore throats, all being diagnosed as "quinsy," "tonsillitis," "bad sore throat," etc., and no quarantine whatever having been established, the infection was spread throughout the community.

Scarlet Fever:—Four dairy farms were inspected for this disease and regulations established for the sale of milk. All these cases were widely separated with no connection between them. Six cases of scarlet fever were reported during the year.

Chicken Pox:—Twelve cases were reported from two townships. In January an outbreak occurred in Montgomery township. The school was ordered closed for one week and disinfection to be performed before reopening.

In December, according to instructions from the Department, I investigated an outbreak of chicken pox in the borough of Orrstown. The Board of Health was inactive, having no materials whatever

with which to carry on the work. Suggestions were given relative to organizing a new Board to comply with the law.

Measles:—Two hundred and nineteen cases were reported, one hundred and seventy-eight occurring in Greene Township during March and April.

One case of cerebrospinal meningitis was reported from Shade Grove. This patient died before the diagnosis could be confirmed, but as the clinical history pointed to cerebrospinal meningitis (epidemic) the house was ordered disinfected and placarded for ten days. Only one other case was reported during the year.

Statistical Summary of Work Done During the Year.

Forms 36 received,	219	Dairy farms inspected,	57
Forms 37 received,	217	Sale of milk stopped,	39
Schools closed,	18	Scarlet fever,	2
Cases examined alleged to be:		Epidemic meningitis,	1
Typhoid fever,	2	Chicken pox,	16
Diphtheria,	16		

FULTON COUNTY.

Dr. J. W. Mosser, C. M. I. I beg to submit the following report of work done in Fulton County, during the year 1914, by the representatives of the Department of Health.

Fulton County has an area of four hundred and two square miles and is divided into eleven townships and one borough, the entire county, with the exception of the borough of McConnellsburg, coming under the direct supervision of the County Inspector.

Of the thirty-five reportable diseases, only nine were brought to the attention of this office, the total number reported during the year being ninety-five, as follows:

Twenty-nine cases of measles were reported by physicians and householders. The disease was reported from four townships, the largest number, twenty-two, occurring in Taylor township.

Twenty-five cases of chicken pox were reported, from three townships, thirteen from Ayr, ten from Dublin, and two from Todd Township.

Fifteen cases of typhoid fever were reported from five townships, six in Wells, four in Belfast, two each in Ayr and Dublin, and one in Taylor township.

Three cases of diphtheria were reported, two from Dublin and one from Bethel township. One dairy farm in Dublin township was

inspected on account of the existence of this diseases and the sale of milk discontinued until after the quarantine period had expired and the premises were disinfected.

Two cases of scarlet fever were reported, one each from Taylor and Ayr townships.

Three cases of whooping cough were reported.

Four cases of tuberculosis were reported, three from Bethel township, one from Union township.

Eleven cases of pneumonia were reported from five townships

Three cases of cerebrospinal meningitis were reported, two from Dublin, one from Wells township. On February 14th, following instructions from the Department, I made an investigation of conditions at Burnt Cabins where it was reported that a man had died of spotted fever. I found that one J. H. M. became ill on February 1st. Two physicians were called on February 4th, one of whom diagnosed cerebrospinal meningitis. The patient died the next day and a public funeral was held on the 8th, the physician stating that the condition was not contagious. On the 7th another man, W. G., was taken sick with severe earache, chills, and high temperature. This case was diagnosed as cerebrospinal meningitis on the 9th by the attending physician, and the house placarded by Health Officer Deaver. This patient died on the 10th. The other case reported to the Department was found to be lobar pneumonia. People were somewhat panicky and I was called into eight or ten homes for the purpose of examining persons who had slight head ache or back ache but found no symptoms of meningitis. No other cases were reported from this locality.

Statistical Summary of Work Done During the Year.

Forms 36 received,	52	Examined cases alleged to be:	
Forms 37 received,	44	Chicken pox,	15
		Measles,	10
		Diphtheria,	1
Dairy farms inspected,			1
Sale of milk stopped,			1
Schools closed,			3
Number of miles traveled by livery,			134

GREENE COUNTY.

Dr. John T. Iams, C. M. I. The past year has been a relatively unimportant one owing to the low proportion of contagious diseases and the absence of any marked epidemics. The credit for the latter

is due in a measure to the prompt and efficient work of the local health officials as we have had two threatened outbreaks, in which quick action aborted any further developments. In August smallpox was reported at Nettle Hill, Greene County, but absolute quarantine and thirty vaccinations limited the cases to the initial one.

In December two cases of diphtheria appeared in a public school of Morgan township. Immediate closing of the school and complete disinfection held the total number of infected cases down to three. These subjects will be mentioned further under their respective headings.

Greene county continues to hold its position as one of the four pillars on which the State of Pennsylvania stands. We have somewhat less than 600 square miles of farming lands with an acreage of perhaps 367,360, but only a population of about 29,000, and like Pike County, the similarly located County in the northeast part of the State, we have none of these railroad facilities which make Health Department work so easy, as do those two other pillars, Philadelphia and Erie Counties, southeast and northwest respectively. These 600 square miles of Greene County, however, will eventually change these adverse conditions. Many rich mineral deposits underlie this entire district. Three of the largest gas producing companies in the country have a sufficient supply of natural gas to bring about the erection of some of the largest compressing stations in the world. We have three veins of virgin coal underlying the county, one of which veins is the famous Pittsburgh Coking Coal. These valuable mineral deposits must necessarily convert this territory sooner or later into a vast centre of industry with the accompanying element of foreign labor and new fields of fertile soil for the development and spread of contagious disease. When this time comes the rate of these diseases will probably multiply as will also the work of the County Medical Inspector and Health Officers.

Typhoid Fever.—Five cases of typhoid fever were reported in 1914 as against fourteen in 1913, a marked decrease. Four of these cases were reported in September and one in October, but all were scattered cases and no epidemics threatened. Two cases alone were reported in one family in Jefferson Township. All of these cases recovered, not a death being reported during the entire year.

Diphtheria.—Eleven cases of diphtheria were reported, an increase of seven over the preceding year. The cases were scattered with the exception of three of which I have already referred to. In December, Dr. R. E. Brock, of Waynesburg, reported two cases of diphtheria in Westland School, Morgan Township. The County Medical Inspector immediately ordered Health Officer Virgin to close the school and thoroughly disinfect it. Exposed cases were given immunizing doses of antitoxin and the total number of cases were limited to three with recovery in every case. One death was reported

from diphtheria in Richhill Township on February 20th. No other deaths were reported from this disease during the year 1914.

Smallpox:—Early Wednesday morning, August 19th, the County Medical Inspector was called by Dr. S. T. Williams, of Nettle Hill, who stated that he had visited a suspicious case the day previous and was afraid it might be smallpox. The County Medical Inspector immediately visited the case in company with Doctor Williams and Health Officer Rice. On examination he found a well developed case of smallpox. The patient gave a history of having visited Pittsburgh, but was unable to give any definite place of infection not knowing of any smallpox in or around Pittsburgh. The County Medical Inspector established absolute quarantine and ordered vaccination and isolation for all parties who had been in contact besides the usual treatment. Thirty exposed cases were vaccinated and kept under supervision for the required length of time. No further cases developed and the patient made a complete recovery.

Measles:—Eight cases of measles were reported as compared with eighteen in 1913. No serious results were experienced.

Mumps:—Two cases reported.

Whooping Cough:—One case of whooping cough. No death.

Statistical Summary of Work Done During the Year.

Total Forms 36 received,	33	Examined cases alleged to be:	
Total Forms 37 received,	36	Smallpox,	1
		Typhoid fever,	5
		Diphtheria,	11
		Scarlet fever,	5
		Measles,	8
Dairy farms inspected for contagious disease—None.		Mumps,	2
		Whooping cough,	1

Health Officers instructed at the office, 2.

Health Officers instructed elsewhere, 6.

Schools ordered closed (on account of diphtheria), 1.

Sale of milk stopped—None.

Total distance traveled—40 miles.

HUNTINGDON COUNTY.

Dr. H. C. Frontz, C. M. I.

Mumps:—Received information from Health Officer H. that Mrs. C. G. had mumps, that no physician was in attendance, and that the case developed about May 26, 1914. Investigated the case and found the information correct; as quarantine time had expired, I ordered the house to be fumigated.

Scarlet Fever:—Received information on July 13, 1914, that there were two cases of suspected scarlet fever at the home of E. H., in

Shirley Township. On July 14, 1914, I visited the premises of E. H. With Dr. C. A. R. M., and found two boys, ages four and seven respectively, convalescent with the disease. Date of onset July 4, 1914. Reported the case on form 34 and had them regularly quarantined.

Measles.—Received information on February 7, 1914, that measles were in the home of J. N., Warriors Mark Township, and that no physician was in attendance. I visited the home and found two children sick with the disease. I reported them on form 34 and they were quarantined in the regular way.

Smallpox.—I received information January 13, 1914, from the Board of Health of Huntingdon that Miss F. B., of Henderson Township, this county, came from Bellwood on train No. 24, Pennsylvania Railroad, January 13, 1914, and that she was a contact of a smallpox case by name of Miss B. McD. of Bellwood, a school teacher, she having slept with Miss McD. the night before. I went to Henderson Township to the residence of G. B., father of Miss B., where she had gone on the morning of January 14, and found her there, and learned that the information I had received the night before was correct. I took Health Officer McE. with me and had her submit to vaccination, as also the father and mother and a brother and sister in the same household, and directed Miss B. to come to my office for observation every other day for eighteen days, which she did. I had the Health Officer fumigate her clothing and the rooms she had occupied since coming to the home of her father. Miss B. is a school teacher in Antis Township, Blair County, and said that the School Board told her she might as well go home. I immediately notified the Railroad Company of the train and car in which she came to Huntingdon from Bellwood and they at once had the car fumigated, as well as Bellwood and Huntingdon stations in which she was on the way to her home.

I received information relative to smallpox existing in family of G. R., Warrior Ridge, Logan Township. C. R. was quarantined on the 9th of December, 1913 for smallpox which had its onset on November 30, 1913. After my arrival home from St. Louis I learned that several of the other members of the family had also contracted the disease and on December 29, 1913, I visited the premises again, and found B. R., M. R. R. and W. W. all suffering with the disease. The date of the onset of the last case was December 14. One member in the same house by name of F. W., husband of W. W., did not contract the disease. January 14, I again visited the place, examined all who had the disease, found that they had entirely cleared up, and also sent form 39 to Health Officer T., as well as word about some animals on premises which I directed to be exterminated.

Fumigation was not done until late on January 16 and they were released on that day. No other cases developed. I had two efficient guards on duty, one for day and one for night.

On January 16 I received information from Dr. H. L. D. in Dudley that he had a suspicious case in that borough which he believed to be smallpox and asked me to come up to see the case. I directed him to quarantine the premises until my arrival. On January 27 I went to Dudley, looked the case over with the physician, and found W. M. of Dudley, aged 59, a miner and Justice of the Peace, suffering with a marked case of smallpox. He had pustules all over his body, gave a history of "grippe" from January 9 and did not work until January 10, could not work that day and went home. The eruption came out January 14. He said he was vaccinated when he was a boy but I could see no mark of successful vaccination. I questioned him as to his movements, and he informed me that the only place he had been in for several months was Huntingdon on December 26 and 27, and that he was at the National House for a short time on the 27th.

The National House had a case of smallpox develop in the person of the proprietor's child about January 6. The only contact of this case out of Dudley was Mrs. E. M. of Portage, sister-in-law of W. M., she having left for her home January 16, Mr. M. having accompanied her to the station. January 29 I telephoned to J. B. M. of Portage who is connected with the Portage Board of Health, giving him the information relative to Mrs. M., asking him to treat her as a contact. Met several members of the Board of Health and School Board of Dudley while there, and directed them to take all precautions against the spread of the disease. Learned January 28 that a joint meeting of the Board of Health and School Board was held, decided to close the schools for one week for those children to be vaccinated who had not been successfully vaccinated within five years. Reported the case January 28 to Dr. H.

On March 21, I received information from Dr. E. H. G. of Mill Creek that J. K., age nineteen, son of J. K., was suspected of having smallpox. We went over the case; the eruption seemed to come from some application to the chest and back and justified no definite diagnosis. It was not smallpox and we could get no history of any contact with such a case. The patient died next day and I think his disease was pneumonia.

From the Health Officer of Union Township I received information of a number of marked smallpox cases in that vicinity. I visited the suspected places with Dr. S. I found that Mrs. S. M., aged seventy-two, had mild attack of the disease, with a date of onset about April 20. Her daughter, R. M., aged forty-five, also developed it about the same time. On going to the home of W. M. I found two of his chil-

dren sick with smallpox, viz. L. M., age five, with a date of onset March 20, 1914, and R. V. M., age six months, with a date of onset April 10. After recovery they showed distinct pox marks on the face. I also visited J. D., wife, age forty-two with a date of onset March 20, 1914; baby D., age two months, having a date of onset March 18; L. D., age two years, with a date of onset March 27; G. D., age seven, with an onset on April 2; D. D., age five, with a date of onset April 2. None of these were vaccinated; three others in the house had been successfully vaccinated and did not take disease.

Going to the home of W. C. B., I found his son, W. H. B., age thirty-one, with a marked eruption of smallpox. The date of the onset was April 25. This man is a grandson of Mrs. M. S. M., and boarded in the vicinity of these other cases, and had never been vaccinated. W. M. is the son of Mrs. M. S. M. and he and his wife and one daughter had had smallpox seven years ago and only two of the children, who have been born since, contracted the disease at this time. The cases were all quarantined and two sets of guards employed. Mrs. M. S. M. was visiting her daughter, Mrs. L. C. C., in Juniata Township, and went to her home on a P. R. R. train April 27. I directed Mr. L. C. C. to have all his family vaccinated who had not been successfully vaccinated within the last five years. I directed Health Officer H. in Juniata Township to fumigate clothing and premises of Mr. C. which was done; all were kept in observation during incubation period.

I received information that on May 2 Miss E. M., a trained nurse, who was home from Philadelphia at her mother's, Mrs. M. S. M., had got past the guards and had come to Huntingdon, contrary to our orders, being under quarantine. She was quite defiant and said she would do as she pleased. Dr. S. telephoned me about the case and I telephoned Dr. Hunt May 2, who directed me to have Health Officer S. issue a warrant for her arrest, the hearing to take place after quarantine. This was promptly done and submission followed.

I went to Mapleton again on May 3 and found A. R. living in the immediate vicinity, age thirty-four and afflicted with smallpox, with a date of onset March 27, and not vaccinated. I also found M. R., age three months, with a date of onset April 18. All the cases were promptly quarantined. I also found F. D., age eighteen, daughter of D. D., living near by, with suspicious eruption, and decided that she had smallpox. Date of onset was April 4. I directed Health Officer S. to fumigate house and make report of the case as having existed. None of the rest of the family had any suspicion of the disease. This disease seems to have originated from the D. family who moved from Lewistown the latter part of January, 1914.

On May 6, I went with Dr. J. G. S., Health Officer, Union Township, to D. C's Lumber Camp on Terrace Mt. in Union Township, and

found J. C., son of D. C., ill with discrete smallpox, rather mild. Date of onset was April 28. He was infected by cases in Union Township near Mapleton. I established absolute quarantine but could only get one guard, the premises being on the mountain, and employed W. A. C. at \$2.50 a day, to work fourteen hours.

On May 8 I sent Health Officer Dr. S. to the Coder Lumber Camp to vaccinate contacts in the camp and vicinity, fumigate shanties, and completely isolate J. C. from the rest of the camp. He vaccinated seven and arranged affairs so that work could go on. He also learned the names of contacts at Calvin in Trough Creek with J. C. May 3, in his automobile; and investigated the place on May 10, finding ten persons who were contacts. He vaccinated them and fumigated the house where J. C. had been. It was found that W. W. W. of Colfax was also a contact. He was vaccinated and treated as a contact.

No other cases developed in that part of Union Township. May 27 I revisited the camp with Health Officer Dr. S. and found that none of the contacts had developed the disease. The patient having entirely recovered, I fumigated shanty and released the quarantine.

May 13, I went to Mapleton and released from quarantine the families of J. D. and W. M., all having recovered.

On May 15, I received information from Health Officer S. that D. D., age sixty, Union Township, had developed smallpox. I ordered absolute quarantine and, as he was in close proximity to other cases, it was possible to use the same guards. I went to see this case on May 16.

Having received information from Dr. G. W. S. of Mill Creek of a case of smallpox, I found E. F., age six, daughter of W. F. in Mill Creek Borough with mild case of smallpox. I established absolute quarantine and day and night guards at \$1.75 a day. This patient was infected from D. D., who was at her home about ten days before and whose daughter F. had been reported as having had it and who was practically over it when the cases in Union Township were found.

May 17, I went to Mapleton and with Health Officer S. vaccinated all persons in houses near the D. D. premises. The houses being so close together the whole community were contacts. We vaccinated twenty-one persons. Three families refused vaccination. I established absolute quarantine and the next day they were willing to be vaccinated by Dr. S.

May 19, I went to Mapleton, and released from quarantine M. S. M., R. M., A. R., and M. R., all having recovered and the quarantine period having expired.

I withdrew the charge against E. M., the trained nurse arrested for breaking quarantine, on condition that she pay costs of \$3.12

which had been incurred. This she did when she found that she would be fined if she had a hearing.

May 16, Dr. S. and I directed all churches, Sunday Schools, and Moving Picture Shows to be closed in Mapleton for two weeks on account of the proximity of smallpox in their borough and the carelessness of the people.

May 24, I investigated with Health Officer S. three other cases of smallpox in the family of W. B., Union Township. The father, mother, and son R. developed the disease May 18, all refusing vaccination. The mother permitted the three daughters to be vaccinated and none of them developed smallpox. Those under quarantine were E. F., D. D., W. B., Mrs. W. B., W. B. Jr., and R. B.

June 10, I went to Mill Creek and released from quarantine E. F., he having fully recovered and no other cases having developed in that house.

June 14, I went to Union Township, and examined D. D. who had recovered from smallpox. Thirty days from onset having elapsed, I ordered his release June 15, 1914 which was done. No other cases developed in that house.

June 17, I went again to Union Township, and released from smallpox quarantine W. B., Mrs. W. B., W. B., Jr. and R. B., they having fully recovered and thirty days quarantine having elapsed from the date of onset of last case. We are now free from smallpox in Huntingdon County.

Typhoid Fever:—May 2, I investigated the dairy farm of M. F., of Entriken, Lincoln Township, on whose premises was a case of typhoid fever, his daughter V. Mr. and Mrs. F. had charge of the milking and a son and daughter had charge of the milk and butter making. I permitted them to continue the sale of butter on condition that F. and his wife had nothing to do with the milking and butter making. On May 8, I again inspected this dairy farm.

June 25, as requested, I investigated the source of infection of three cases of typhoid fever at Three Springs, with Dr. H. G. H. I found that in the family of C. P., in Three Springs Borough, three cases had developed:—M. age seventeen, date of onset June 18; R. age sixteen, date of onset June 20; L. age eleven, date of onset June 10. Positive Widal reaction was obtained in the cases of M. and R. The family consisted of three other boys and three girls, Miss P., a sister of Mrs. P. and two nieces. Of the children affected only R. and M. had been away from Three Springs, having been in Orbisonia, six miles away, one month ago. The water supply consisted of a well and a cistern, which had not been used for drinking purposes at all, and a spring about ten feet away from Three Springs Creek, which runs through the premises, but seemed not in any way to be contaminated by the creek. They secured their drinking water and water for cook-

ing purposes from this spring. The spring is lime stone water, with apparently no surface drainage into it. The water from Saltillo Creek is piped to the premises from a mill race near by and this water is used for washing purposes. As the buckets used to carry water which came through the pipes may also have been used to secure drinking water from the spring, infection seemed possible. The water from Saltillo Creek did not seem very good judged by an inspection of the creek a mile and a half from the mill. Saltillo is one and one half miles from Three Springs, and I found that about seven sewers from Saltillo emptied into the creek. The ice used was secured from the dam of Saltillo Creek, about three quarters of a mile above, and this also might be the source of the infection.

Mr. P. runs a dairy farm consisting of ten cows and supplies the neighborhood of Three Springs with milk. When these cases developed eight of the cows were transferred to another farm, two cows being kept for the use of the family. Milk cans were cleaned with water from the spring and no contamination seemed to come from that source. There were no flies of any kind and conditions about the premises seemed sanitary. I sent samples of water taken from the spring, well, and water pipe to the farm, from the mill race supplied by Saltillo Creek, and also samples of town water to the Laboratory for examination. No other cases were found in the vicinity.

July 16, I received information from Health Officer J. R. L. of Warrior's Mark, that Mrs. M. K., age thirty-three, from Pennsylvania Furnace, had typhoid fever at the home of her sister, Mrs. H. G. in Franklin Township, Dr. L. M. H. of Pennsylvania Furnace being the attending physician. My information stated that milk was sold from the premises. I visited this place, July 17, and investigated the dairy farm, as well as the probable source of infection of this patient. I found that they had fifteen cows and sold milk to the Creamery at Pennsylvania Furnace about half a mile from the farm. I found that Mrs. G. had taken every precaution as to discharges, washing of bed clothes, and protecting herself against infection. Mrs. G. had nothing to do with the milking or care of cows, milk, cooking or other household work, taking entire charge of the patient. The persons handling the milk did not come in contact with the patient. I examined the water supply and privy but found no source of infection. Mrs. B. having spent most of the winter and spring in the vicinity of Bellwood and Altoona, I permitted the sale of milk to continue.

On September 10, I investigated the dairy farm of M. K. in Smithfield Township where his son H. had typhoid fever. Milk was sold from premises. Milk from four cows was sold to D. S. who sells milk in Huntingdon. Mrs. K. the mother had full charge of the patient. Mr. K. had full charge of the cows and milking and did not

come in contact with the patient. I allowed him to continue the sale of milk on condition that he remain in full charge of milk and milking and that Mrs. K. be kept entirely away from it.

September 27, I took a census of the typhoid fever in Dudley Borough and Carbon Township immediately adjacent. Eighteen cases were reported and investigated. Seven of the cases were sent to the Blair Memorial Hospital, Huntingdon. The water seemed to be the cause of the trouble; I directed samples of water to be sent by Health Officer G. and Dr. H. L. D. to be examined. A sign was put on the Big Spring and J. R's well and I gave other placards to Health Officer G. to use when a report on the water was received. There were no requests for financial aid or help by the Department in furnishing nurses, and from personal observation I saw no need for it at this time. Two cases of typhoid fever are at this time in the Hospital at Huntingdon and there are two or three suspected cases.

October 2, I visited the premises of M. K. and W. McK., both of Smithfield Township, living on adjoining farms and selling milk. Mr. K. had one case of typhoid fever and Mr. McK. had two cases and he subsequently developed it himself. Mr. K. arranged for another dairyman to take charge of his cows and the milk, and the sale of milk was permitted to continue. Mr. McK. could not make such an arrangements and the sale of his milk was discontinued.

An epidemic of nineteen cases of typhoid fever developed in Huntingdon Borough about this time and also in Dudley Borough, and it was difficult to determine one particular source for all cases. Mr. H. E. Moses of the Engineering Division spent considerable time investigating the source of infection and thought that the public water supply of the borough may have been a source of infection.* This is problematical, however, as the outbreak was hardly wide spread enough to have been caused by a commodity that is so generally used. Also the water company was constantly dosing the water with chlorinated lime. As only a portion of the water is filtered Mr. Moses thought that the infection might have appeared in the distributing system in a more or less attenuated form and thus be the means of infecting some persons whose physical condition predisposed them to such disease germs. This was more or less theoretical of course as there were no definite facts to back it up. Mr. M. summed up the nineteen cases as follows:—

	Cases		Cases
Imported,	5	Unknown,	1
Bathing in river,	2	Insanitary surroundings,	2
Secondary,	1		
Contact,	1	Total,	19
Handling raw vegetables,	1		

*A detailed account of this investigation forms section No. 24 in the report of the Division of Sanitary Engineering.

In the last item the two cases were more or less isolated and in each household there was only a single case, but the surroundings were such that persons living thus would be more or less predisposed to infection.

Received information from Mr. Moses of the Engineering Division as to the typhoid fever outbreak at Dudley.* He seems to think it largely a case of neighborhood infection. There were eighteen cases studied in Dudley and Barnettstown twelve of which were in Dudley and six in Carbon Township, in which township the village of Barnettstown is located. Out of twelve cases eleven are grouped in four houses near the intersection on Dudley Hill and here the primary case in the town occurred. He believes that this case was infected at Robertsdale and became a source of infection for some of the other cases in the immediate vicinity in which this case lived, the infection being spread primarily by means of flies. In this locality there were also secondary cases in some households. For the cases occurring outside of Dudley the source of infection is not evident, but the history of two of these cases shows contact with other cases over in Dudley.

October 24 I received information from Health Officer T., sent on Form 36, that Mr. P. M. had typhoid fever on the premises of O. B. in Porter Township and that milk was sold from the premises. I investigated with Mr. Moses of the Engineering Division who was in town at that time. We found that milk was not being sold and that the patient was practically over the fever.

I received information that M. I. B. of McConnellstown in Walker Township had two children ill with typhoid fever and that he sold milk in Huntingdon. I visited the premises on October 29, and inspected the dairy farm on which they had ten cows. Mr. B. and daughters do the milking; neither of these daughters was infected. The probable source was the drinking water at the McConnellstown School. I directed Mr. B. to discontinue the sale of milk until he could secure some one to buy it wholesale and then only on condition that the buyer send some person there with cans to do the milking and immediately take the milk away.

November 16, I received information on form 36 from Health Officer J. L. reporting M. C., age thirty-two, as having typhoid fever on the premises of P. C., Spruce Creek Township, and that butter was sold from the premises. I visited farm of Mr. C. and inspected the dairy. I found that they milked seven cows, the milking being done by Mr. C. and two boys, and that butter was made by Mrs. H., an aunt, who also helped nurse the patient. They have not sold butter since the diagnosis was made. Directed them to discontinue the sale of butter until case was reported off as the cows could not be transferred to another place. The premises were fumigated.

*This investigation may be found in section No. 13 of the report of the Division of Sanitary Engineering.

Statistical Summary of Work Done During the Year.

Forms 36 received,	304	Cases examined alleged to be	
Forms 37 received,	245	Scarlet fever,	2
		Measles,	2
		Mumps,	1
		Typhoid fever,	21
		Smallpox,	22

Two boroughs investigated on account of typhoid fever epidemic.

Two boroughs investigated on account of two cases of smallpox.

 INDIANA COUNTY.

Dr. Wm. A. Simpson, C. M. I. A summary of the work done by your County Medical Inspector for the year 1914 is as follows:—

Indiana County's total area is 829 square miles and is divided into twenty-four townships with sixteen Health Officers and fifteen boroughs. The County had in the last census a population of 66,210. Of this population, 16,454 reside in boroughs; leaving a rural population of 49,756, which comes under the direct supervision of the County Medical Inspector.

During the year, it has been necessary for me to visit three of the townships and two of the boroughs and to travel by rail a distance of eighty miles and by livery sixty-two miles.

This office has received during the year 645 reports (Form No. 36) for the placarding of premises where a communicable disease exists. We also received during the year 591 reports (Form No. 37) for disinfecting premises. All of these reports were carefully filed. Last year we received 846 of Form 36 and 706 of Form 37, showing quite a considerable decrease.

Of the thirty-two communicable diseases only twelve were reported by the seventy-two practicing physicians of the County, and are as follows:

Anterior Poliomyelitis:—We received one report of this disease from Rayne township in October. Last year no report of this disease was received at this office.

Cerebrospinal Meningitis:—One report of this disease was received from West Mahoning township in May. Last year no report of this disease was received.

Chicken Pox:—Forty-eight cases were reported as against fifty-three cases last year. This disease occurred in eight of the townships and in every month of the year except August, September, and December. Twenty-six cases occurred in Center township alone.

Diphtheria:—One hundred and seventy forms for placarding this disease were received this year, as compared with one hundred forms during 1913, and seventy-one during 1912. This disease was prevalent throughout the County, only four of the townships being free from it. With the exception of fifty-five cases which occurred in Montgomery township, the disease was well scattered. Reports were received every month of the year, with seventy-six cases alone being reported during October, November, and December.

Erysipelas:—Fifteen cases of this disease were reported this year. Seven of these occurred in Montgomery township. Six cases were reported last year.

Measles:—Of this disease 171 cases were reported as compared with 387 reported last year. This disease was found in all but six of the townships. The only epidemic reported was in Pine township, where seventy-six cases occurred. The disease was most prevalent during the month of February, when sixty-two cases were reported to this office.

Mumps:—Twenty-eight cases were reported as compared with forty-seven reported last year. These cases were reported from seven townships. Thirteen cases occurred in Canoe township alone.

Pneumonia:—One case of this disease was reported from Rayne township in February. Last year no report of this disease was made.

Scarlet Fever:—Ninety-six cases of this disease were reported to this office during the year as compared with 157 cases last year. This disease occurred in all months of the year, excepting June and August. It was necessary for me to visit three townships in regard to this disease. My first trip was to South Mahoning township in January, where it was necessary to enforce the Department's quarantine rules on the twenty-seven cases which existed there. In February it was necessary for me to establish a diagnosis in a case of scarlet fever in Center township. In November I visited West Wheatfield township for the purpose of enforcing quarantine in this disease.

Tuberculosis:—Eight cases were reported as against three in preceding year. Apparently only the terminal cases of this disease were reported and only then for the purpose of disinfecting.

Typhoid Fever:—In this disease fifty-two cases were reported as compared with a hundred and twelve reported last year. This disease occurred in every month of the year and in all but five of the townships. With the exception of thirteen cases, which occurred in Green township, the disease was well scattered throughout the County. In February I visited Aultman in Center township to establish a diagnosis of eight cases suspected to be typhoid. In June it was necessary for me to visit the Borough of Clymer to trace the source of infection which had caused ten cases in that Borough.

Whooping Cough.—Fifty-four cases of this disease were reported this year as compared with seventy-three cases in the previous year. This disease occurred in all but one month of the year, and thirty cases alone were reported from Montgomery township.

The chart will, I think, give a clear idea of the number of cases in each of the twenty-four townships and also the number of cases occurring during each of the twelve months.

	Anterior poliomyelitis.	Cerebrospinal meningitis.	Chicken pox.	Diphtheria.	Erysipelas.	Measles.	Mumps.	Pneumonia.	Scarlet fever.	Tuberculosis.	Typhoid fever.	Whooping cough.	Total.
Armstrong,	2	.....	.....	1	1	1	.....	5
Banks,	4	.....	3	1	.....	3	1	.....	.....	16
Blacklick,	5	7
Brushvalley,	1	.....	6	.....	.....	.....	.....	.....	1	2
Buffington,	1	9	.....	9	.....	.....	.....	1	.....	.....	19
Burrell,	6	.....	.....	.....	.....	2	.....	1	1	19
Canoe,	13	4	3	13	.....	28	1	4	.....	66
Cherryhill,	4	.....	1	.....	.....	3	.....	1	1	10
Center,	26	11	.....	22	1	.....	11	3	3	2	79
Conemaugh,	2	3	.....	1	.....	.....	3	.....	.....	.....	10
Grant,	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Green,	6	17	3	23	.....	.....	7	1	13	5	75
W. Mahoning,	1	1	.....	1	.....	.....	.....	.....	3	.....	6
E. Mahoning,	1	.....	.....	.....	.....	.....	.....	.....	.....	1
N. Mahoning,	3	.....	.....	.....	.....	.....	.....	.....	.....	1
S. Mahoning,	5	8	.....	1	.....	.....	19	.....	.....	4	39
Montgomery,	3	53	7	6	1	.....	5	.....	.....	30	109
Pine,	5	.....	76	5	.....	2	.....	.....	.....	88
Rayne,	7	.....	1	.....	.....	.....	.....	.....	.....	23
Washington,	1	.....	1	.....	.....	.....	3	1	3	.....	.....	.....	6
White,	2	.....	1	.....	.....	.....	.....	.....	.....	4
E. Wheatfield,	15	.....	2	.....	.....	1	.....	.....	.....	24
W. Wheatfield,	4	4	.....	7	4	.....	7	.....	.....	.....	23
Young,	3	.....	4	.....	.....	.....	.....	.....	.....	7
Total,	1	1	48	170	15	171	28	1	96	8	52	54	645
January,	22	10	.....	19	7	1	16	.....	1	.....	76
February,	7	13	.....	62	4	.....	3	.....	3	.....	95
March,	4	7	.....	34	5	.....	18	.....	1	2	73
April,	8	.....	23	1	.....	16	.....	.....	5	56
May,	1	2	.....	24	.....	.....	2	1	3	3	49
June,	2	1	.....	6	.....	.....	.....	3	2	11	29
July,	4	8	.....	.....	3	.....	8	1	3	2	29
August,	19	.....	.....	1	.....	.....	.....	8	11	39
September,	17	.....	1	1	.....	6	.....	12	3	40
October,	1	.....	4	24	2	1	.....	.....	7	2	7	10	58
November,	2	33	.....	.....	1	.....	16	.....	9	5	66
December,	19	.....	3	5	.....	4	1	2	1	35
Total,	1	1	48	170	15	171	28	1	96	8	52	54	645

JEFFERSON COUNTY.

Dr. S. Meigs Beyer, C. M. I.

Measles:—On January 9th at the request of Health Officer F., we visited the Albion School District, it having been reported that a rash existed among the pupils of these schools, and that the children were untreated and the disease unquarantined. We visited the schools first and definitely learned that an infectious disease existed among the pupils. We then visited a large number of homes, finding in one family five children suffering from measles. This family resisted quarantine severely but were placed under quarantine finally without any serious trouble. In three families the disease was entirely over and the children had returned to school. These pupils were excluded from school until the homes were fumigated. A number of homes were visited where no disease had been manifest prior to this time. We notified the Secretary of the School Board to fumigate the entire school building. This was done. We instructed teachers to exclude from school all pupils coming from infected homes or on suspicion that infection existed in the home pending our further investigation.

On January 15th we further investigated this District as a result of reports made to Health Officer F. that new cases had developed and that quarantine was not being carried out. We visited six homes, in all of which we found children suffering from measles. Proper quarantine measures were established in all of these homes.

Smallpox:—On January 11th by direction of Doctor Hunt of the Department of Health I investigated the employees of the Miller Construction Company, an employee of the Company having been in contact with a case of smallpox thereby exposing the members of the office force and others to the infection. I visited the homes of all the office employees and vaccinated all the members of the families. The offices were fumigated at my direction and also the room occupied by the exposed employee in the Y. M. C. A. Building. These cases of vaccination were kept under observation for fourteen days. No further infection resulted. By order of Dr. Hunt all cases of chicken pox existing within the county or developing within the next thirty days were to be examined. This order was carried out.

Chicken Pox:—On January 31st I investigated a number of families suffering from chicken pox at Cloe, Bell Township. The diagnosis was confirmed. Several families were placed under quarantine. All these cases were untreated by physicians.

February 2d I inspected two cases alleged to be chicken pox at the home of D. G. at Cloe, Bell Township. The diagnosis was con-

firmed. The head of the family objected to quarantine but after explaining the necessity he yielded to quarantine measures but objected to fumigation of his house later; this however, was accomplished without any difficulty.

German Measles.:—On February 4th instructed the Health Officer relative to violation of quarantine for German Measles in the family of L. O. D. in Bell Township.

On February 11th I visited this home and found the children in school in violation of our quarantine. The teacher was aware that the family had German Measles and that on this account they were under quarantine at the time, but had accepted the statement of the householder that he had fumigated the house. The patient suffering from measles was not in school but two other children from the family were. The infected case was not isolated and the children came directly to school from the infected home. This violation of quarantine was an absolute defiance on the part of the householder. These children were promptly excluded from school, and after a great deal of difficulty the family consented to obey the quarantine. The teacher was instructed. No further complaint was made.

Chicken Pox.:—On February 27th I investigated and placed under quarantine three families in which chicken pox existed. These families attended school at the Chestnut Grove School, Gaskill Township. No other case found.

Scarlet Fever.:—On March 6th I investigated a report of two cases of scarlet fever in Young Township in the family of P. Mac C. The diagnosis was confirmed and quarantine established. I ordered the fumigation of the Adrian Church. This was done by the Department Health Officer.

Garbage Disposal Plant.:—April 7th, by order of the Department, I investigated the garbage disposal plant (dump) allowed to exist by the Reynoldsville Borough in Winslow Township. Complaint had been made by C. W. P. These grounds were in a frightfully insanitary condition owing to the improperly buried dead bodies of animals of all kinds. The ground was strewn with every conceivable form of filth and rubbish. Springs near by and in use by the public were being infected by dogs that ate of the carrion and then drank the water and waded in it. The odors emanating from this dump were very foul and the surface water from this dump drained about a hundred feet into Red Bank Creek thereby infecting this stream. I recommended an incinerating plant to dispose of this material and stop the infection of these water supplies.

Water Supply.:—April 16th I instructed Health Officer M. to investigate the complaint of Dr. B. that the water supply of Wishaw, Winslow Township, was in a filthy condition. The result of this investigation was the abatement of such nuisances as were responsible

for the infection of the water. This was done to the satisfaction of the complainant.

Diphtheria:—April 4th I investigated a report of Dr. R. C. G. of violation of quarantine of diphtheria by an employee in the family of F., under quarantine in Punxsutawney, the contact having gone to McCalmont Township. After considerable difficulty this girl was found and placed under fourteen day quarantine pending developments.

Alleged Smallpox:—On May 11th at the request of a physician and in company with him I investigated a case in Punxsutawney Borough suspected of being smallpox. The diagnosis was not confirmed. Provisional quarantine was established pending a clinical report on the Wassermann reaction, which gave positive results.

Scarlet Fever:—May 15th by order of the Department and at the request of a Health Officer I investigated an epidemic of scarlet fever in Knox Township. I visited seven cases and confirmed the diagnosis in all. This epidemic involved the Italian colony largely. Through an interpreter I instructed the families involved and warned them of the danger of the spread of the disease in the colony. No further cases were reported.

Diphtheria:—On September 19th I investigated the family of H. H. in Bell Township, suspected of having diphtheria and of being responsible for spreading the infection to families of relatives, two of which were under quarantine for diphtheria the result of the visiting back and forth of these families. This family resisted examination, but after a conference with the family physician and a threat to exclude the wage earner from employment, permission was granted to make a culture from the throat of each member of the family and to establish a provisional quarantine pending the result of the examination. The Laboratory reported three of the children of this family infected and the quarantine was continued for twenty-one days. The result of this examination or investigation doubtless prevented the infection of the entire Fairview School District.

Impetigo Contagiosa:—September 21st, Dr. T. reports to H. O. Kyle a case of scarlet fever in Rose Township. Also the presence of a rash in Pine Creek Township, Britton School District. I investigated and found a number of pupils suffering with impetigo contagiosa. These were excluded from school. Epidemic promptly checked.

Whooping Cough:—July 17th, in company with H. O. Kyle, I investigated a case suspected of being whooping cough in Belgom town district, Pinecreek Township. A number of cases were placed under quarantine and no further infection was reported.

Measles:—December 21, I made an inspection of an epidemic of unquarantined measles in the Britton School, Pinebrook Township. The diagnosis was confirmed in twenty-one cases and proper sanitary protection enforced.

On December 10th, at Emmerickville—I made an inspection of an epidemic of unquarantined measles in Pine Creek Township; twenty-three cases were found and placed under quarantine. One case of mumps in Union Township was placed under quarantine.

Statistical Summary of Work Done During the Year.

Form 36 received, 383 Form 37 received, 372

The following diseases were reported during the year:

Measles,	106	Schools closed and fumigated for:—	
German measles,	19	Measles,	3
Diphtheria,	50	Diphtheria,	6
Mumps,	18		
Chicken pox,	37	Churches fumigated for:—	
Scarlet fever,	48	Scarlet fever,	1
Typhoid fever,	20	Measles,	3
Tuberculosis,	43		
Whooping cough,	37		
Erysipelas,	4		
Pneumonia,	1		
	333		

JUNIATA COUNTY.

Dr. W. H. Banks, C. M. I.

Diphtheria:—January 31, I was asked by Dr. Willard of Mexico and several School Directors of Turbett Township to investigate a sudden outbreak of diphtheria in that township. I found that Shelley H., wife, and three children, had gone on a visit to a friend, a few miles from their home, and while there one of the children took suddenly ill and died, with a diagnosis of tonsillitis. The family then started home, stopping over night at the residence of Allen K., who with his wife and ten children occupied a three room, one and a half story house. While at K's, H's wife and two children took sick and in a few days died. About this time the diagnosis had been made and quarantine established. When I visited the K. home I found that two of the K. children had contracted the disease. These subsequently recovered and no further cases developed either in this family or in the community.

September 1, while examining one of the patients at the Tuberculosis Dispensary, a girl of sixteen, I found that she had a well developed case of tonsillar diphtheria. She was immediately sent to her home and the family visited. Five cases were found in this family and four cases in an adjoining family, and a little later two

other families were found to have the disease. Antitoxin was given to all the members of these different households. The schools were also closed for two weeks and disinfected.

November 7, at the request of Dr. Longacre of Fremont, I visited Susquehanna Township and with him examined ten undiagnosed cases of sore throat. These had been going on for several weeks and had been carelessly called tonsillitis and quinsy. The disease was immediately pronounced diphtheria and quarantine established. The school was closed for two weeks and also disinfected. There were twenty-four cases in this outbreak and six deaths.

Scarlet Fever:—There have been numerous cases of this disease, usually in a very mild form, and this is a great temptation on the part of the parents to evade quarantine.

April 9 I visited Van Wert in Walker Township and found nine cases in three families. These were so mild that a physician had not been called for some of them. One of the very mild cases subsequently developed nephritis, from which she died.

Smallpox:—We had two families under quarantine with this disease. Cora S., while working in a hotel in Snyder County, contracted the disease and was immediately sent to her home by the landlord of the hotel. She communicated the disease to all of her family, consisting of father, mother, and ten children. By careful quarantine and an efficient guard, the trouble was limited to this one family.

December 24, at the request of Dr. Quig of East Waterford, I visited that place and confirmed the diagnosis made by him a few days previous. The patient Elmer D., the rural mail carrier, had purchased a fur coat from a firm in Chicago, and had been wearing it about three weeks when the disease developed. His family was immediately vaccinated as well as all the contacts and a very effective quarantine maintained by a reliable guard, and in this way the trouble was confined to the single family.

Typhoid Fever:—We have had fewer cases of this disease than in any year of my service as County Medical Inspector. There have been seven sporadic cases and in no instance has there been more than one case in a family.

The following diseases have been reported during the year:

Scarlet fever,	21	Typhoid fever,	7
Diphtheria,	65	Whooping cough,	2
Measles,	21	Smallpox,	13
Mumps,	13		

LACKAWANNA COUNTY.

Dr. J. C. Reifsnnyder, C. M. I. I have the honor to report on my work for the year 1914 and include abstracts of letters reporting communicable diseases in Lackawanna County.

Smallpox:—March 2. I was called to Mayfield yesterday by the Secretary of the Board of Health to verify a diagnosis of smallpox, and found three cases in the family of Paul J., none ever vaccinated. These cases are traced to Samuel and Joe C., brothers of Mrs. J., who came here from Niagara Falls the latter part of January. Smallpox has been raging during the winter in Niagara Falls and the brothers have returned to Niagara Falls. I could not learn with whom they were in contact while in Niagara Falls before coming to Mayfield. I have carefully looked up all Mayfield contacts. Dr. Martin is Health Officer for the Board at Mayfield and has carefully looked up contacts and the vaccinating.

April 27. I was called to Jermyn by Dr. Davis to see one George H. in contact with Paul J. of Mayfield where there were three cases of smallpox in March. I could not diagnose smallpox and asked Dr. Davis to hold the man in temporary quarantine.

April 30. Referring to suspicious cases in Jermyn, wish to report it as a light case of smallpox, George H., aged 32, successfully vaccinated in childhood, unsuccessfully vaccinated in January, 1914.

September 11. Following instructions from the Chief Medical Inspector, I met Dr. Kenworthy of Milford at Blooming Grove Township, Pike County. Going by rail would have necessitated several days travelling, so I went to Blooming Grove by automobile. The case of Mrs. John V. is undoubtedly smallpox. She never was successfully vaccinated. The onset was September 2. She had left Scranton where she visited August 15th going home by way of the Erie Railroad, and spending the greater part of the day in Hawley, Wayne County, so that the source of her infection must have been on this trip. I have a list of the houses she visited while in Scranton and those while in Hawley and shall carefully look up the contacts. Dr. Kenworthy will look up the contacts in Pike County.

September 14. Learning that Mrs. John V. of Pike County, smallpox case, had visited the home of Edward S. of Factoryville, I yesterday visited Factoryville and vaccinated all in the house. I could learn of no suspicious cases.

Infectious Diarrhoea:—I wish to report that after a talk with the men of the Lackawanna County Medical Society that they agree with me that there have been a great number of cases of enterocolitis, be-

ginning about July 20th. Just previous to that time we had a number of very severe storms and our water supply was very muddy. The City Bacteriologist found an unusual number of colon bacillus and the Scranton Water Company closed and subsequently cleaned the Roaring Brook Reservoir. The water furnished the northern part of the city comes from a different shed and did not seem to be affected. There were no cases in North Scranton. These physicians all reported many cases of intestinal infection beginning the latter part of July. Their description agrees with mine; from simple diarrhoea of a non-febrile course of four or five days, to enterocolitis, with fever, cramps, mucous stools, and a paratyphoid condition, though in none of these cases were microscopical examinations made. The later cases ran some ten days. Onset:—diarrhoea and cramps; stools: diarrhoeal with streaks of mucus and, in a few instances, a little blood. Fever running from 99° to 100°. Soreness over abdomen. Weakness and prostration out of proportion to illness. Stomach not affected. Recovery beginning the sixth to the tenth day with tendency to relapse. The local registrar assures me, however, that there have been fewer deaths from diarrhoeal diseases this summer than in many seasons. Certainly my own observation would lead me to think that we have had less disease of that character save in the period mentioned, July 20 to the middle of August, and then only in the central city. It seems clear that the infection was from the Roaring Brook reservoir and that the condition was promptly cleared by the Scranton Water Company.

Typhoid Fever:—In September I investigated a case of typhoid fever on a dairy farm in West Abington Township, Walter W., aged 21, with onset about September 12. All precautions are being taken. Instructed those having anything to do with the milk or with the cattle to leave the house. Young W. was taken sick while working for J. C. Northup about one mile distant. I investigated the house of Northup and found a poorly installed closet which was connected with a stream nearby. The sewage pipe had burst about September 1 and young W. had cleaned the cellar. I ordered Northup to abate the nuisance and install a cesspool. I also inspected Charles G. ill of typhoid fever in West Abington.

October 14. I investigated a case, reported as typhoid fever, at the Concord Hotel, Moosic Lake. The case was brought in from outside. The water supply and sanitary conditions appeared to be all right.

October 4. I inspected the house of H. W., West Abington; a negative case.

Scarlet Fever:—January 3, I inspected a case of scarlet fever at the dairy farm of Art S., Newton Township, and arranged that the cows be taken care of by neighbors. Strict quarantine was established.

Diphtheria.—April 3. On telephone call from Dr. Bowers of Scranton, I inspected a case of diphtheria in the house of John B. of Chinchilla, South Abington Township. John B., Jr., aged six years, had undoubtedly diphtheria. Dr. Bowers had been discharged and another physician from Clarks Summit called in who diagnosed the case as simple sore throat. Placarding and quarantine were objected to, but a threat of summoning the police brought the family to reason.

April 6. The father, John B., was taken sick April 3, and a diagnosis of quinsy was made by the Clarks Summit physician. B. died tonight.

May 17. I inspected the house of W. B., Benton Township, finding one case of diphtheria. Milk workers do not live on the same farm.

Inspection of Court House.—March 5. According to your letter of March 2, I this day inspected the Jury Rooms in the Court House. My recommendations are as follows:—

First. That all four rooms be cleaned, the walls and ceilings painted or recoated, and the floors painted or covered with linoleum. That liquid soap be provided with a proper container at each washstand. That closets be painted. That paper drinking cups be kept at each stand in proper containers. That air ventilators be provided for closets.

Secondly. That the janitor be instructed to arrange the windows in all rooms when occupied at frequent intervals so as to provide adequate ventilation, with a daily airing and cleaning of rooms. That, although he says he at present furnishes two clean sheets and pillow case each day, all bedding be aired daily and all bedding be disinfected when there is any change in the jury. That one or more shower baths be installed in Room No. 1, which is generally used, room for this to be gained by encroaching on tipstave's room adjoining. That another washstand be added and provision be made for hot water heated by gas to serve washstands and shower baths. That Room No. 2, if it is ever to be used, have a shower bath and one more stand, the same equipment as for Room No. 1.

The sleeping rooms are cramped as regards size; have no comfortable chairs nor conveniences, and are not properly cleaned.

LANCASTER COUNTY.

Dr. J. L. Mowery, C. M. I. In order properly to perform the duties of County Medical Inspector for the year 1914, I traveled 1,956 miles by rail and 420 miles by livery.

I received at this office 770 reports of placarding for communicable diseases (form No. 36) and 664 reports of disinfection (form No. 37) from the fifteen district Health Officers in the County and tabulated them on sheets No. 59. These reports were carefully examined and proved complete before being entered upon the records at this office.

Of the reportable diseases this office had sixteen to do with, as follows:

Chicken Pox:—One hundred and sixty-six cases were reported during the year, every month being represented except May; August and September each with one case reported; while December, November, and January had the greatest number, December having fifty-one credited to it. The disease was confined throughout the year to limited areas.

Diphtheria:—This disease made its appearance during every month in the year, a hundred and one cases having been reported to this office, November having the largest number, and March the smallest. This disease did not assume any extreme epidemic form at any time during the year, although it was found necessary to close several schools in order to check the spread of the infection.

Erysipelas:—Of this disease fifteen cases were reported during the year to this office, generally widely distributed and none bearing any relation to another.

Measles:—There were exceptionally few cases of measles reported during the year, and owing to the fact that they were reported promptly by physicians so that the Health Officer could avail themselves of quick action in controlling the spread of the disease, forty-eight cases made the total number reported to this office. The greatest number appeared during March and April with none during July, August, and November, and only one each for September and October.

Mumps:—There were only eight cases of mumps reported to this office during the year, three in January, two in June, one in September and two in December.

Pneumonia:—There were twelve cases of pneumonia reported to this office during the year occurring only in five months of which March and December each had four cases. They were all widely distributed geographically and none having any apparent relation to any other.

Scarlet Fever:—There were sixty cases of scarlet fever reported to this office during the year, every month being represented in this report. October had the largest number, fourteen; with February a close second, thirteen cases; July, August, and December having each one case; the other months of the year had a pretty even distribution. I found it necessary on several occasions to close the schools and have the rooms disinfected for the purpose of controlling the

spread of the disease in certain localities. This, with other precautionary measures, was effective in preventing the spread of the disease in districts presenting its development.

Tuberculosis.—In an area of nine hundred and sixty square miles with a population of ninety thousand coming under the direct supervision of this office there were only twelve cases of Tuberculosis reported during the year, seven months being represented in this summary report: March and April—each one case; June—two cases; August—two cases; October—two cases; November—two; and December—one case. This is the smallest number received at this office for any one year during the time that I have served as County Medical Inspector, and a very small number in proportion to the population.

Typhoid Fever.—One hundred and thirty-one forms No. 36 were received at this office during the year noting that Typhoid Fever existed. Every month in the year was represented in the reports. The greatest numbers were reported in January, March, April, August, September, and October with January leading—twenty-nine cases being recorded during this month. It was my privilege to visit many of the premises where the disease existed in order to establish safe regulations for the disposition of the dairy products. I always took notes of the sanitary conditions existing as well as the probable source of infection. The bulk of the cases during the months of January, February, March and April, about forty in number, were confined to the townships in the eastern side of the county known as the New Holland District. It was then assumed that a special factor common to this district should be responsible for this unusual number of cases developing at a season of the year in and around the holidays. Upon investigation and by obtaining a complete census of the cases, it was found that a great many oysters were brought by residents of this district from local dealers. It was, therefore, assumed that oysters may have been a common transmitting agent over this territory, and a special report on this subject was prepared by the Associate Chief Medical Inspector.

Whooping Cough.—There were two hundred and thirty-one cases of Whooping Cough reported to this office during the year, having rather a wide distribution and covering every month of the year, November having the greatest number. I usually have the Health Officers cope with this disease without my assistance.

Malaria.—There was but one case of Malaria reported during the year.

Smallpox.—Eleven cases of smallpox were reported during the year, one in January, seven in February and three in March, all confined to the Billmeyer district, Conoy Township. Billmeyer is a small river town where the Dolomite quarries are being operated with about three hundred employees, mostly foreign and negro, in constant attendance

on the works. By a wholesale vaccination and absolute quarantine, we succeeded in holding the disease on three premises with no later outbreak. A fuller report on this subject by the Assistant Chief Medical Inspector will be found among the special reports accompanying this communication.

The fifteen district Health Officers of the County have done service diligently and faithfully in the discharge of their duties; no complaint in regard to their action has reached this office. The laity generally have shown a disposition of acquiescence in matters pertaining to health and sanitary conditions. Physicians throughout the County show an appreciation of the doings of the Department of Health. School Boards, teachers, and Health Boards have repeatedly asked for my presence in matters pertaining to health and sanitation.

LAWRENCE COUNTY.

Dr. Jesse D. Moore, C. M. I. I beg to submit to you at this time a short and incomplete résumé of work performed by your Medical Inspector and Health Officers in this district (Lawrence County) during the year 1914. We deem it not necessary to go into details as to times and manner of doing this work, having heretofore from week to week sent reports to the Department fully setting forth what was done in the performance of our several duties as either requested or required by you. Believing this will be satisfactory to you, our report now will be almost altogether statistical.

During the year I received at this office reports of placarding communicable diseases (Form 36), 322. I received also reports of disinfection and fumigation (Form 37), 214. These forms were forwarded to your office promptly at the end of each week, after having been entered as records at my office. Of all reportable diseases as designated by your ruling, we have been necessitated personally to inspect but forty-eight cases, and these were, without exception, of what are usually termed minor troubles, namely:

Whooping cough,	27	Measles,	2
Chicken pox,	17	Mumps,	2

Reportable diseases throughout the district were as follows:

Typhoid fever,	30	Diphtheria,	43
Scarlet fever,	37	Measles,	10
Whooping cough,	127	Chicken pox,	24
Mumps,	32	Cancer,	1
Pulmonary tuberculosis,	6	Erysipelas,	4
Pneumonia,	8		

All of these cases were looked after and given careful and thorough attention by your Health Officers until released from quarantine after thorough fumigation and disinfection. In fact, I believe we have in this district, a thoroughly proficient and competent force of Health Officers. I have, from time to time during the year, namely, on fifty occasions, deemed it necessary to call in and instruct your Health Officers on different matters pertaining to their duties as such. These occasions, together with dates, have been fully set forth in my monthly reports to the Department. These short conferences between your Medical Inspector and Health Officers seems to me to be of very great importance. I have found that we all work in greater harmony and with better results on this account.

Again speaking of diseases reported to me during the year, that you may more thoroughly understand the distribution of such, I will now enumerate them by districts, together with the name of the Health Officer presiding over such, namely:

Little and Big Beaver Townships, H. O. S. W. Wilson reported:

Diphtheria,	2	Typhoid fever,	4
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Shenango Township, H. O. E. N. Houk reported:

Chicken pox,	6	Pneumonia,	1
Scarlet fever,	6	Typhoid fever,	2
Mumps,	4	Diphtheria,	9

Slippery Rock and Perry Townships, H. O. Andrew Glasser reported:

Whooping cough,	48	Diphtheria,	5
Tuberculosis,	1	Typhoid fever,	1

Wilmington and Hickory Townships, H. O. Mehard Neal reported:

Scarlet fever,	3	Diphtheria,	4
Typhoid fever,	1	Measles,	1

Neshannock Township, H. O. A. S. Moore reported:

Scarlet fever,	2	Measles,	2
Whooping cough,	45	Mumps,	3
Chicken pox,	1		

North Beaver Township, H. O. J. C. Bright reported:

Typhoid fever,	8	Mumps,	1
Scarlet fever,	5	Measles,	2
Chicken pox,	2	Tuberculosis,	1

Wayne Township, H. O. Frank D. Allen reported:

Scarlet fever,	9	Measles,	1
Tuberculosis,	1	Diphtheria,	3
Erysipelas,	1		

Pulaski Township, H. O. Harry Torrence reported:

Scarlet fever,	3	Measles,	1
Whooping cough,	8	Cancer,	1

Scott, Washington, and Plain Grove Townships, H. O. J. A. Magee reported:

Scarlet fever,	5	Measles,	1
Typhoid fever,	5	Diphtheria,	2
Pneumonia,	4		

Taylor, Mahoning, and Union Townships, H. O. Lewis H. Hawthorne reported:

Scarlet fever,	4	Erysipelas,	3
Whooping cough,	26	Diphtheria,	18
Tuberculosis,	3	Pneumonia,	3
Typhoid fever,	9	Mumps,	24
Chicken pox,	15	Measles,	2

You will notice from this report the distribution of the different reportable diseases over our entire district, which, taking into consideration the population of each district, would seem to be a fair and even distribution. In each and every one of these instances, I have been careful to see and know that your Health Officers were not allowed, in any instance, to neglect any measure deemed to be right and proper to curb any further outbreak of disease, and believe that on the whole we have been entirely successful. The doctors practising medicine in this county are, with few exceptions, diligent, careful, and prompt in reporting communicable diseases to your Health Officers. It has on two or three occasions during 1914 seemed necessary for me to see three physicians, that I might have a personal talk with them in regard to their duties in reporting to us. In every instance they have taken this kindly and I believe, as they state, their actions will be such that criticism will at no time again be required. During the year I have been consulted very frequently by Boards of Health in boroughs, etc., as to their duties as required by the State Department of Health, and in each instance I have endeavored to give to them any directions that I believed to be of use that they might comply fully with the laws governing such matters. This fact appears to me to show not only a willingness but a desire to comply with rules governing our Department. During the year, in no case have we had any friction between township, cities, or incorporated boroughs.

I believe this short résumé will be all that is necessary and everything required by you at this time.

LEBANON COUNTY.

Dr. A. J. Riegel, C. M. I. The year 1914 has had no epidemic of any kind, the beginning of the year having ended the smallpox epidemic of 1913, during which time there had been reported about eighty cases

of smallpox. The medical inspection of this county, conducted by the five Health Officers and the Medical Inspector, was carried on carefully, without any friction or troubles of any kind from the public.

Our work has been done on the educational plan, carried on with firmness, promptness, and in a business like manner, as required by the State Department of Health.

The Health Officers have been in perfect harmony with the Medical Inspector in their work, having performed their duties faithfully and promptly in their districts, assisting the Medical Inspector wherever possible and whenever called upon, thus making the work pleasant and effective for our mutual results.

Statistical Summary of Work Done During the Year.

Forms—36 received,	218	Examined cases alleged to be:	
Forms—37 received,	217	Scarlet fever,	1
		Diphtheria,	1
Dairies inspected for:—		Whooping cough,	8
Typhoid fever,	10	Chicken pox,	2
Scarlet fever,	7	Mumps,	5
Smallpox,	1		
Diphtheria,	8		

Sale of milk stopped from three premises.
 Number of schools closed from diphtheria, 1.
 Number of Health Officers instructed, 1.
 Number of miles traveled by livery, 480.
 Number of miles traveled by railway, 304.

LEHIGH COUNTY.

Dr. J. Treichler Butz, C. M. I. This summary of work done for the year will be largely statistical with only such brief comment as may be necessary to make the same clear.

This county has an area of 344 square miles, and is divided into one city, ten boroughs, and fifteen townships. The population is about 127,000. The city, boroughs and one first class township contain about 93,000, leaving the population of the townships 34,000, which has to do with this report, coming under the direct supervision of the County Medical Inspector.

The distance traveled by rail was 538 miles and 25 miles by livery.

During the year 732 reports of placarding for communicable diseases (Form 36) were received from the seven district health officers in the county. These officials also sent in 493 reports of disinfection (Form 37). All these reports were carefully examined and if incomplete or additional information desired, they were returned to the proper Health Officer before being entered on the records of this office.

Of the thirty-five reportable diseases, this office had to do with but fourteen during the year, as follows:

Anterior Poliomyelitis:—Two cases were reported.

Chicken Pox:—Fifty-two cases of this disease were reported by physicians and householders. The disease appeared in seven townships.

Diphtheria:—One hundred and four cases of this disease were reported, Salisbury township having the greatest number of cases.

Dysentery:—One case was reported.

Erysipelas:—Three cases reported.

German Measles:—Five cases reported.

Measles:—Two hundred and seventy-seven cases of this disease were reported by physicians and householders during the year. It appeared in twelve townships, the greatest number of cases, one hundred and three being reported in North Whitehall Township in the month of March.

Mumps:—One hundred and twenty-eight cases were reported by physicians and householders. It appeared in nine townships, the greatest number in Upper Milford township, sixty-one cases.

Ophthalmia Neonatorum:—One case was reported in South Whitehall township.

Pneumonia:—Three cases of this disease were reported.

Scarlet Fever:—Thirty-eight cases were reported and appeared in nine townships. Two dairy farms were inspected.

Tuberculosis:—Eleven cases were reported.

Typhoid Fever:—Forty-one cases were reported during the year. The disease appeared in eleven townships, the greatest number of cases, ten, being reported in South Whitehall township. Nine dairy farms were inspected during the year.

Whooping Cough:—Forty-eight cases of this disease were reported by physicians and householders during the year, appearing in nine townships.

The seven health officers of the county have been uniformly prompt and careful in the discharge of their duties. During the year Health Officers Mr. P. J. Brown, of Allentown, and Mr. B. J. Schlosser, of Schnecksville, died.

I cannot close this report without calling attention to the splendid support given me by the physicians of the county in our work and in reporting their cases promptly.

Statistical Summary of Work Done During the Year.

Forms 36 received,	732	Verified,	
Forms 37 received,	493	Chicken pox,	1
Dairy farms inspected:		Mumps,	1
Typhoid fever,	9	Miles traveled by rail,	538
Diphtheria,	3	By livery,	25
Scarlet fever,	2	Stock transferred on account of typhoid fever,	1

LUZERNE COUNTY.

Dr. Charles H. Miner, C. M. I. During the year 1914, 1,045 reports of communicable diseases (Form 36) were sent in by sixteen district Health Officers in the county, and 840 reports of disinfection (Form 37). The reports of communicable diseases far exceed those of 1913 when only 724 reports were received.

Chicken pox:—During the year one hundred and eight cases of chicken pox were reported by physicians and householders. The disease occurred in fourteen townships, and the greatest number reported in any one township was in Hazle Township, where thirty-two cases developed, twenty-six cases in Nescopeck and Salem Townships, sixteen in Black Creek and Sugar Loaf Townships, twelve in Kingston Township, and an average of two in the other Townships.

Diphtheria:—This disease occurred in twenty-five of the Townships during the year, a total of one hundred and sixty-seven cases being reported; Kingston Township having the greatest number, forty-four cases; Hazle and Foster Townships, twenty-two cases; Pittston and Jenkins Townships, twenty cases; Lehman, Lake, Dallas, and Franklin Townships, twenty-one cases; Black Creek and Sugar Loaf Townships, seventeen cases; Plymouth Township, twelve cases, and an average of three or four cases in the other Townships.

Erysipelas:—Four cases of erysipelas were reported during the year.

Measles:—Measles heads the list of all the communicable diseases reported during the year when four hundred and seventy-one cases were reported. Epidemics of this disease developed in Black Creek and Sugar Loaf Townships where they had thirty-eight cases; in Duryea Borough during September, October, and November when fifty-five cases occurred; in Hazle and Foster Townships, where one hundred and forty-eight cases developed. On May 27th, I wrote the Secretary of the Black Creek Township School Board and directed him to close the schools until they were thoroughly fumigated and he complied with our instructions. On June 8th the schools at Humboldt, Hazle Township, were ordered closed and fumigated.

Whooping Cough:—Sixty-five cases of whooping cough were reported from twelve of the townships, the greatest number occurring in Kingston Township, twenty-five cases, eighteen in Bear Creek Township, and ten in Jackson Township, and of one or two in each of the other Townships.

Cerebrospinal Meningitis:—Two cases of cerebrospinal meningitis were reported, one case in Jackson Township and one in Hazle Township.

Tuberculosis:—Ten cases of tuberculosis were reported to the Health Officers where fumigation was required after the removal or death of the patients.

Mumps:—One hundred and eleven cases of mumps to the Health Officers during the year in twelve of the Townships.

Scarlet Fever:—One hundred cases of scarlet fever developed. There were thirty-three cases in Hazle Township, the greatest number reported in any one Township; eleven in Kingston Township, and an average of three and four in the other Townships.

Typhoid Fever:—Only twenty-three cases of Typhoid fever were reported during the year, which shows a marked difference from 1913, when fifty-three cases were reported. The diseases occurred in ten of the Townships; eight in Jenkins and Pittston Townships; five in Foster and Harris Townships, and an average of one and two in the other Townships.

Smallpox:—Only one true case of smallpox was reported in the county for the year 1914.

On January 8th I was requested by Dr. Davis of Glen Lyon and Dr. Meyers of Wanamie, to come to Glen Lyon to see a suspected case of smallpox. On visiting Glen Lyon I found the patient, a man about sixty-five years of age, lying on a couch in a kitchen of the house behind a very hot stove. He was covered with a very light rash which the attending physician stated had appeared on December 24th. I did not diagnose the case as smallpox, but told the physicians I thought the rash was due to some toxæmia, which it proved to be.

Besides the contagious diseases reported under the different headings I had reports of two cases of membranous croup; two cases of pneumonia; nineteen cases of epidemic dysentery, which were reported during September in Hazle and Foster Townships and personally investigated by Doctor Hunt. Five cases of scarlatina; and one case of German measles.

On May 6th I was called to Black Creek Township by Health Officer Smith to diagnose suspected cases of measles. After visiting the homes of three families where the disease was suspected I was unable to make a diagnosis as the children were entirely well.

May 8th, I made a trip to North Avoca to interview Mr. J. Walters, President of the Borough Councils of Duryea Borough and Dr. Symthe of Avoca Borough about organizing active Boards of Health in Duryea and Avoca Boroughs, but thus far no permanent organizations have been made and the Department is looking after the work in both Boroughs.

On June 11th, I was summoned by Dr. Lake, of Kingston, to go to Luzerne Borough to see a suspected case of smallpox. I found the patient, a boy of four years, suffering with smallpox. The child had been brought by his mother from Detroit, Michigan, ten days before and evidently contracted the disease in Detroit as the family occupying the next apartment to them had had smallpox. The child recovered and with strict sanitary precautions and isolation no other cases developed.

On June 18th, I went with Mr. R. B. Styer, of the Engineering Division, to investigate conditions at the Patterson Grove Camp Grounds where there had been an epidemic of typhoid fever after the encampment of 1913. On the grounds we had interviews with four members of the Camp Ground Association and gave them instructions as to how the Grounds were to be renovated; new closets built and the old ones closed, and a new water supply dug for. Our instructions were carried out as we found later on July 15th, when the grounds were reinspected by the Deputy Medical Inspector who reported that everything was in first class condition.

On July 22d, I went to Dorrance Township with Health Officer Good to investigate a case of typhoid fever, where it was reported that milk was being sold from the premises. After visiting the home I found that the case was probably not one of typhoid fever, but all precautions in regard to the care of the milk were taken.

During the latter part of July six cases of typhoid fever were reported in Kingston Borough on the milk route of one of the local dealers. Dr. Lake, a member of the Kingston Borough Board of Health and the Deputy County Medical Inspector, investigated the farms of the producers from whom the Kingston dealer secured his milk, but no source of typhoid contamination was discovered, although dirty and unsanitary conditions were found. Through the cooperation of the Chief Medical Inspector every effort was made to find the source of the typhoid infection, water analyses made, etc., but nothing was determined. Fortunately, however, no new cases developed, and the cases made a good recovery.

On September 28th I was called by Doctor Long of Hunlock's Creek to visit Hunlock Township to diagnose three cases suspected to be typhoid fever. On examination the cases proved to be true typhoid fever. Water specimens were secured and sent to the State Laboratories for analysis, and the water in one of the wells and a spring were found to be contaminated. The Health Officer saw that the well and the spring were both thoroughly cleansed.

On December 8th, the Chief Medical Inspector directed me to visit a family in Hanover Township, where there had been six cases of typhoid fever. After getting in touch with Doctor Davis, of the Hanover Township Board of Health, we made a careful investigation

and found that the father of the family had possibly infected the entire family, as he had been ill during the months of September and October with every symptom of typhoid fever, although a diagnosis of typhoid had not been made and no sanitary precautions whatever taken.

On December 12th, I was called to Glen Lyon by Drs. Meyers and Davis to see a case suspected of being foot-and-mouth-disease. The man, a foreigner, aged forty-five, had been sick for six weeks and was treated by four different physicians at first for typhoid fever, then for kidney disease, then for inflammation of the mouth, and necrosis of the alveoli. Dr. F. E. Davis, a veterinarian, was also called to see the case. After a careful examination of the patient and the history of the case I diagnosed it as a severe case of scurvy. We did not establish any quarantine.

It is evident that the knowledge of the rules of the State Department of Health are being eagerly sought for as I was interviewed on twenty-one occasions by officials of First-Class Townships and Borough Boards of Health, and forty-nine times by physicians, eleven times by individuals, and on thirty-three occasions by the township health officers.

LYCOMING COUNTY.

Dr. C. W. Youngman, C. M. I. Lycoming County during the year 1914 was fairly free from epidemic diseases. As County Inspector I was not called for often as nearly all emergencies were met by our Health Officers. A few schools were closed for fumigation but not many as exposures in the schools were few.

Measles were the most prevalent disease and in June from an exposure in Hepburn Township it spread all summer and fall throughout the adjacent townships and seemed to be most frequent in the neighborhood of Sunday Schools and after church festivals as no public schools were open at this time. One hundred and seventy-seven cases occurred. Twenty-seven cases of typhoid fever occurred, nearly all of these sporadic cases occurring on farms or in small villages from local infection. No epidemics resulted, due entirely to the attention given to the dejecta from the patients. There were thirty-nine cases of mumps; two German measles; nine tuberculosis; sixty-eight diphtheria; fifty-six chicken pox; eighty-five whooping cough; seven erysipelas; one trachoma; one puerperal sepsis; one cerebrospinal meningitis; and one anthrax. The anthrax was from

a local tannery handling South American hides and was treated at the Williamsport Hospital where they have cured a number of cases by the local injection of carbolic acid.

In all, 517 cases of contagious diseases occurred, eighteen less than in 1913.

McKEAN COUNTY.

Dr. F. Wade Paton, C. M. I. I succeeded Dr. W. Clyde Hogan, as County Medical Inspector of McKean County on August 4th, 1914, and beg to submit the following summary of the work done during the year. For the most part this report has been made up from office records in the Department and from the County Medical Inspector's memorandum sheets.

Two hundred cases of communicable diseases were reported during the year, only four of them requiring special investigations by this office.

On June 10th, following instructions from the Department, an investigation was made at Ludlow on account of an epidemic of scarlet fever in that borough. I found four houses placarded and the quarantine regulations strictly enforced. No further investigations were necessary and the outbreak was soon under control.

In November a case of scarlet fever was reported as existing on a dairy farm in Wetmore Township. A careful inspection was made of the premises and as no satisfactory arrangement could be made for the handling of milk its sale was discontinued until after the premises were disinfected.

One dairy farm was inspected on account of the existence of diphtheria. As all work connected with handling of the milk was done in a dairy house separate from the residence it was allowed to be continued by persons living outside the dwelling.

During October an outbreak of whooping cough was reported in the Marshburg School. As all the pupils were found to have the disease the school was closed for several weeks and disinfection ordered before reopening.

Statistical Summary of Work Done During the Year.

Forms 36 received,	193	Dairy Farms inspected,	2
Forms 37 received,	226	Cases examined alleged to be:	
Schools closed,	2	Variola,	3
		Diphtheria,	1
		Scarlet fever,	1
Number of miles traveled by railroad,			244
Number of miles by livery,			20

MERCER COUNTY.

Dr. P. P. Fisher, C. M. I. I submit to you the following report for 1914. There were reported to me by the thirteen Health Officers on Form 36, one hundred and sixty-seven contagious and infectious diseases.

Typhoid Fever:—There were thirty cases of typhoid fever reported. Fourteen of them were in close proximity to Grove City and followed the epidemic there in the fall of 1913 and the early winter of 1914; the other sixteen cases were scattered throughout the country, very few of them along the Shenango River. It was necessary to stop the sale of milk products from four farms. One was shipping his milk to Youngstown, Ohio, the others were selling their milk to the various towns in close proximity to their homes.

Diphtheria:—Thirty-four cases were reported. In four families milk and milk products were sold. They were ordered to discontinue selling until the quarantine period was over and the house disinfected. They were all very willing to comply with the request.

January 3d, Dr. G. of Clarks Mills telephoned me that he was called to see a child in Fairview Township. The child did not appear to be very sick at the time and no throat trouble could be seen. The Doctor told the parents if the child did not seem all right to telephone him the next day. He heard nothing from them the next day, but the day following a hurried call came that the child was dying. When the doctor reached the home the child was dead. The doctor thought from the symptoms he got from the parents it was diphtheria, therefore, he wished me to come and make an investigation. I did so and performed a post-mortem. I found the throat entirely filled with a diphtheritic membrane. There were several children in the family; I ordered anitoxin used on all the contacts, also a private funeral and disinfection of the house. There were no more cases in the family or neighborhood.

Scarlet Fever:—There were twenty cases reported. Five cases were in one family in Delaware Township. They had called no doctor and a neighbor telephoned me that he thought there was scarlet fever in the family and asked me to come and see what the trouble was. I made an inspection and found five cases, most of them were in the stage of desquamation. I had the house placarded and all the other necessary precautions taken. A few days later I learned from reliable sources that they were breaking quarantine. I made an investigation and found that they were going and coming just as they pleased; even would go to the store after I told them it would be necessary to post a guard if they persisted in going out.

They promised to observe the quarantine. After that I had no further complaints. It was necessary to stop the sale of milk from one farm until the quarantine period was over and the house disinfected.

Smallpox:—I was called to diagnose a case of smallpox in Farrell, the attending doctor being in doubt about the case. I found a well marked case in a colored child. We had the child removed to the pest house and the contacts vaccinated and all other precautions taken. There were no other cases developed from this one. I am satisfied, from the history I got that the infection in this case came from Virginia.

In November, Doctor B. of Jamestown, telephoned me to come up and make a diagnosis in some cases that he had been called to see and which he thought resembled smallpox. I made an inspection and found that for a month or so they had been having a disease which the patients thought was grippe, with a little eruption, and but a few of them had called a doctor. I made an inspection and found there had been a good many cases, perhaps twenty or more and many contacts. I did not care to assume the whole responsibility so I wrote the Department and Doctor Hunt came on and I went over the cases with him, and we were of the opinion that it was smallpox. Doctor Hunt remained a few days to see that the proper precautions were taken. It was confined to Jamestown. I visited the schools in close proximity to Jamestown to see if the pupils had been vaccinated. I also saw members of the school board and they agreed to enforce the vaccination law. Dec. 21st., Dr. E. of Sharon asked me to see a case and make a diagnosis, as he was in doubt what it was. I made the inspection and found a well marked case of smallpox. I had all the contacts vaccinated and all the precautions taken. No other cases developed from this case.

In the evening of Dec. 11th, Dr. H. of Mercer, telephoned me to see and diagnose a case in Jefferson Township. I saw the case the following forenoon. It was a well developed case of smallpox. The patient had come from an Ohio town, reaching Sharon on the trolley from Youngstown; he ate dinner with a family in Sharon and went to Greenville in the afternoon on the steam cars, going to a sister's where he remained until the next morning; from there he rode to Fredonia on the Bessemer R. R. and was in a sister's house there in the afternoon, and then went to his home in Jefferson Township. I had the contacts in Sharon vaccinated and then went to Greenville where his sister lived in a double house. There were fifteen contacts there. I vaccinated all of them and then went to Fredonia and vaccinated the eleven contacts at his home. No other cases developed from this case.

Cerebrospinal Meningitis:—One case reported. The only action necessary was to stop the sale of milk from the premises.

Erysipelas:—One case reported. No action necessary on the part of the C. M. I.

Whooping cough, Chicken pox, Measles, and Mumps:—Nearly eighty of the above diseases were reported, respectively as follows: Thirty (30), Ten (10), Twenty-five (25), and Twelve (12). There was no trouble in having the Department regulations carried out in these cases. The people are coming to realize the necessity of taking the proper precautions in these diseases.

Statistical Summary of Work Performed During Year 1914.

Forms 36 received,	167	Forms 34 received,	24
Forms 37 received,	135		
Dairy farms inspected for:		Examined cases alleged to be:	
Typhoid fever,	4	Diphtheria,	1
Diphtheria,	4	Scarlet fever,	6
Cerebrospinal meningitis,	1	Chicken pox,	7
		Whooping cough,	11
		Mumps,	11
		Smallpox,	8

Sale of milk stopped on nine premises. School ordered closed—one, reason measles. Twenty Health Officers instructed at office. Three investigations of epidemics in boroughs.

MIFFLIN COUNTY

Dr. C. H. Brisbin, C. M. I. During the year 1914 one hundred and seventy-nine cases of reportable diseases were recorded at this office for Mifflin County, reported by the five health officers.

Seventeen inspections were made by me of infected premises where milk products were sold: Typhoid fever, two; diphtheria, seven; scarlet fever, five; measles, two; and smallpox, one.

Typhoid Fever:—April 16th I inspected the home of J. M., Wayne township, and discontinued the sale of milk.

December 12th I inspected the home of F. A., Derry township, and discontinued the sale of milk.

Diphtheria:—March 1st I visited the home of H. K., Decatur township, where a case of diphtheria was reported by neighbor. The diagnosis was not confirmed.

May 20th I inspected the home of S. K., Decatur township. I arranged to have milking done by Mr. K. who left the infected premises.

August 17th I inspected the home of S. S., Brown township, and then arranged to have the milking done by a neighbor.

August 27th I inspected the home of J. R., Decatur township, where a child had been sick for several days without a doctor. I made a diagnosis of diphtheria and ordered quarantine.

September 6th I called on school directors of Decatur township to arrange for a fumigation of the school where diphtheria had been found.

September 23rd I inspected home of S. H., Union township. Arrangements were made to have his stock transferred.

October 15th I inspected the home of S. R., Brown township. The sale of milk was discontinued.

Oct. 25th on receipt of a telephone message from Dr. Frontz, County Medical Inspector, Huntingdon County, reporting diphtheria in Wayne township, I visited this township and found three cases. Quarantine regulations were established.

Nov. 20th I inspected the home of R. P., Armagh township, and discontinued the sale of milk.

Scarlet Fever:—Jan. 20th I received a telephone report of a supposed case of scarlet fever at the home of I. A., Decatur township. The diagnosis was not confirmed.

Jan. 30th I received a report by telephone of a supposed case of scarlet fever at the home of E. S., Decatur township. I could not confirm the diagnosis.

Feb. 4th I inspected the home of W. S., Granville township. The sale of milk was discontinued.

April 13th I received a note from a teacher that the child of E. M., Derry township, had been sent home from school with some kind of a rash. I inspected the home and diagnosed scarlet fever. Quarantine was established and the school room fumigated.

May 12th I inspected home of H. M., Brown township. The stock was transferred.

Measles:—Jan. 7th I was notified by a P. R. R. Surgeon that a case of measles existed in a family at Lewistown Junction, Granville township. I made an investigation at this home, and found two cases, and ordered quarantine.

Smallpox:—Feb. 6th I was called to Lewistown lock-up with Dr. Willison to see a case of suspected smallpox. Ordered the man taken to the Almshouse and had the lock-up fumigated. I requested Dr. Hunt, Associate Chief Medical Inspector, to see the case with us, which he did, but could not confirm the diagnosis.

On May 11th I received telephone report from Dr. Mahr, Newton Hamilton, Wayne township, of a case suspected to be smallpox. Visited the case with the doctor and confirmed his diagnosis. I established quarantine and vaccinated twenty contacts.

Statistical Summary of Work Done During the Year.

Forms 36 received,	171	Cases examined alleged to be:	
Forms 37 received,	154	Typhoid fever,	19
		Diphtheria,	57
		Scarlet fever,	52
		Measles,	24
		Chicken pox,	9
		Whooping cough,	6
		Smallpox,	1
		Erysipelas,	3

 MONROE COUNTY.

Dr. Walter L. Angle, C. M. I. During the year 1914 one hundred and thirty-two cases of communicable diseases were recorded by me, returned by three district Health Officers, fourteen townships being represented. No reports were received from two townships. Seven medical inspections were made during the year, two being made by deputies.

Typhoid Fever:—Five cases were reported during the year, all being sporadic cases. No inspections were asked for or required.

Diphtheria:—Thirteen cases were reported, ten of them occurring in Tunkhannock Township. Difficulty was encountered in having the occupants of the house under quarantine obey quarantine in this township. After repeated warnings the occupants agreed to obey quarantine. I was unable to procure guards and the closing of the schools in the township was met with opposition by many of the people of the township. This was the only epidemic of diphtheria during the year. From the physician in attendance upon all the cases I learned that many cases existed prior to his first visit. There being no physician in attendance the cases were not reported. This office was called upon to inspect but one case during the year. Dr. G. S. T. of East Stroudsburg requested me to confirm his diagnosis of a case on the premises of H. V. in Middle Smithfield Township. The other two cases reported occurred in separate townships.

Scarlet Fever:—Five cases were reported during the year, four being reported from one township. Quarantine in these cases was strictly observed.

Measles:—Eighty-four cases were reported during the year. It was necessary to make six inspections, reports being received that the disease existed and not under quarantine. The disease was found to exist on the premises of all the cases reported. Owing to my being quite remote from the premises, two inspections were made by Dr. G. McKay and Dr. Rodgers in Barret Township, three cases being

reported by them. I made inspections in eight cases. The disease was rather widely scattered although the majority of the cases were reported from three townships.

Chicken pox:—Five cases were reported during the year from four townships. No investigations were necessary.

Whooping Cough:—Ten cases were reported during the year from four townships.

Erysipelas:—Two cases were reported during the year from separate townships.

Mumps:—Three cases were reported during the year from separate townships. No investigation was necessary.

Tuberculosis:—Six cases were reported during the year. Where known to have existed the premises are always thoroughly disinfected. The county seems to be particularly free from tuberculosis. The disease unfortunately is not reported in many instances.

Other than measles and diphtheria this county was strikingly free from contagious diseases during the year. During the course of the year it was necessary for me to travel sixty-six miles to make the required inspections.

MONTGOMERY COUNTY.

Dr. H. H. Whitcomb, C. M. I. I beg leave to present a summary of health conditions in Montgomery County during the year 1914, just closed.

About all the usual contagious diseases to be reported have prevailed in the County during this year, mostly in a mild form, so mild usually as to escape the attention of physicians, they not being called upon to treat them. This is especially true of scarlet fever, when the rash was so slight and of so brief duration as not to be observed, and only recognized when some member of a family was more indisposed and a physician called. This, of course, caused a rather wide spread of this disease in some communities. We investigated a number of such outbreaks and in all cases when the history was clear, quarantined the premises. We did not find any case where the physician avoided his responsibility intentionally. Scarlet fever and German measles seem to have been the most difficult for our people to recognize, and with a few exceptions the children were so slightly ill it was difficult to enforce any quarantine until threats were made to shut up the house in absolute quarantine, which was done in a few cases.

I investigated outbreaks of scarlet fever at Jeffersonville; German measles at Perkiomen; typhoid fever in Skippack; chicken pox in Whitemarsh; and saw suspected cases of smallpox in Hatboro which was really chicken pox. I deputized Dr. Jamison to see a suspected case of smallpox at Willow Grove; he reported chicken pox. Dr. Benner was deputized to see German measles in Perkiomenville, but he and the Health Officer were refused admission in one house. I then went there myself and was pleasantly received, so that a suit was not necessary for resisting an officer.

I investigated the sale of milk where there was diphtheria in ten dairies, and stopped the sale or transferred the handling of it in each case.

Examined and confirmed diagnoses in ten cases of scarlet fever, and stopped the sale of milk in three dairies where there was scarlet fever. In one case reported as scarlet fever by the physician in charge, on dairy farm and boarding house of Mr. Lambert, in Lower Providence township, I went personally to see that the milk was properly cared for, only to find that the sick child had been removed to Philadelphia before the Health Officer had quarantined premises. I quarantined the place by absolute quarantine of those remaining, stopped the sale of milk, and by telephone notified Dr. Cairns of Philadelphia, the place to which the child had been removed. Dr. Cairns notified me next day that this child did not have scarlet fever. Quarantine was immediately raised to the relief of every one concerned.

I investigated an outbreak of chicken pox in Whitemarsh and had the places placarded.

On request of Dr. Cairns of Philadelphia, by direction of the Chief Medical Inspector, I investigated cases of scarlet fever supposed to be in Montgomery County, but found to be in Philadelphia and under jurisdiction of Dr. Cairns. I also investigated in Springfield township (first class) the presence of diphtheria, where quarantine was not properly maintained and fumigation very imperfectly done. The local Board was notified of its laxness.

In all, I stopped sale of milk or transferred its care on account of diphtheria, scarlet fever, or typhoid fever, in thirty-two dairies.

Pennsburg borough was reported for laxness in placarding and fumigation for chicken pox and mumps. The Chief Medical Inspector instructed me to investigate, which I did and found that practically no attention was being paid to these diseases. I so reported to the Department and instructed the local Health Board as to its duty and the consequences that would follow disobedience of the law and neglect of its enforcement.

I was called upon to vaccinate a man who had been a contact case with smallpox in Philadelphia but escaped to Montgomery County. I found that he had been vaccinated the day before by a competent physician.

My observation has been during this year that in diphtheria in this County, either the type has been more severe, the use of antitoxin too long delayed or too small doses, or for some other reasons the percentage of mortality has been much higher than in previous years.

The saddest story concerning illness in Montgomery County for the year 1914 is told in considerable detail among the special reports of the Medical Division and deals with the extensive milk-borne epidemic of typhoid fever at Skippackville and in Cedars, Worcester township, and along the Skippack pike. Altogether ninety-one persons were infected in this community directly by milk coming from a single farm or by taking food or drink of this farm. In addition there resulted four secondary cases in houses in which the disease developed, three secondary cases which occurred several months later, persons infected from one of the original cases who became a "carrier" and the illness of several patients whose infection came about through a pollution of water from the premises where a considerable family outbreak developed. A total of one hundred and eight patients thus suffered from the disease and twelve individuals lost their lives from the attack.

Statistical Summary of the Work of the Year.

Form 34 received,	40	Cases examined alleged to be:	
Form 36 received,	742	Smallpox,	1
Form 37 received,	566	Diphtheria,	6
		Scarlet fever,	10
		German measles,	18
		Chicken pox,	4

All diagnoses confirmed except the case of smallpox, which was chicken pox.

MONTOUR COUNTY.

Dr. Cameron Shultz, C. M. I. Whooping cough, having been prevalent to the extent of epidemic during the early months of the year in Mahoning and Cooper Townships, continued to give the Health Officers no little annoyance as but a very few families employed a physician, and the parents in most cases protested saying it was simply a cold. This condition kept up pretty well during the summer without much spreading to adjacent districts.

Chicken pox:—On April 3d two cases of supposed chicken pox were reported in a family in Cooper Township, no physician in attendance. I investigated these cases and confirmed the diagnosis.

December 19th, chicken pox was again reported in a family in Mahoning Township, without a physician. Upon investigation the diagnosis was established, and as a number of children in the immediate neighborhood had been in attendance at school with the disease in evidence, the Mechanicsville School was ordered closed and fumigated.

Measles:—December 22d, Health Officer Patton forwarded Form 34, reporting the existing of measles in Mahoning Township, no physician. I visited the home and confirmed the diagnosis. While in the neighborhood I learned of a number of suspects near by. I visited these homes and found measles at each place. The houses were placarded and the Mechanicsville School again fumigated. During the remainder of the month a number of inspections were made for measles in this district.

Diphtheria:—On December 3d, H. O. Robbins reported diphtheria in the family of William R., Liberty Township, who sold butter in Milton. I visited the premises, and upon the householder's suggestion discontinued the sale of butter or milk during the period of quarantine.

December 26th, I was notified of the existence of diphtheria in the family of Charles L., Anthony Township, a dairy farmer who sold butter to a huckster. I visited the premises and arranged for the discontinuance of the sale of butter until quarantine was raised.

Typhoid Fever:—October 16th, upon the report of the existence of typhoid fever in the home of Lloyd M., Anthony Township, who sold butter, I visited the home. The case of typhoid fever had been brought in from an adjoining county, the young lady being employed in Muncy. As the family could not make satisfactory arrangements the sale of butter was stopped.

Statistical Summary of Work Done During the Nine Months.

Forms 36 received,	93	Cases examined alleged to be:	
Farms 37 received,	61	Chicken pox,	5
		Measles,	14
Dairy farms inspected for:		German measles,	1
Diphtheria,	2		
Typhoid fever,	1		

NORTHAMPTON COUNTY.

Dr. Edgar M. Green, C. M. I. During the year 1914, health conditions in Northampton County were even better than in the year 1913.

One hundred and fifty-eight cases of measles were reported to the County Medical Inspector and this is by far the largest number of any infectious diseases reported. Other cases were as follows:

Typhoid fever,	28	Diphtheria,	32
Whooping cough,	55	Mumps,	21
Chicken pox,	20	Scarlet fever,	14
Smallpox,	1	Erysipelas,	10
Pneumonia,	1	Cerebrospinal meningitis,	1
Tuberculosis,	8		

There were no formal inspections needed and I am glad to report that the Health Officers attended to their work well throughout the County.

One case of small pox was reported from Lower Saucon Township. Although this case occurred in a boarding house and was brought from Philadelphia, strict quarantine regulations prevented any further outbreak and no secondary cases occurred.

I am glad to report that the boroughs throughout the County are observing State regulations with regard to quarantine and disinfection much more thoroughly than heretofore.

NORTHUMBERLAND COUNTY.

Dr. R. H. Simmons, C. M. I. I beg to submit the following summary of work done in this county during the year 1914.

Of the thirty-five reportable diseases only seven required special investigations from this office. Two hundred and eighty-two cases of communicable diseases were reported as follows:

Measles,	89	Whooping cough,	16
Diphtheria,	34	Chicken pox,	9
Typhoid fever,	25	Scarlet fever,	73
Smallpox,	1	Tuberculosis,	87
Mumps,	19		

Typhoid Fever:—Four dairy farms were inspected, all in Point Township, on account of the existence of typhoid fever, one on March 15th, three during October. Samples of the water supplies on the last three farms were sent to the Laboratory for analysis. On November 23rd I investigated a family outbreak in Upper Augusta

township. The father developed typhoid and died, and subsequently three of the children sickened with the disease. These were probably secondary cases due to carelessness of the mother. The water supply, however, which supplied five families in the vicinity was examined at the Laboratory.

Scarlet Fever:—Seventy-three cases were reported from twelve townships, twenty-one of these occurring in Mt. Carmel township. Four dairy farms were inspected on account of this disease, one each in Rush, Lower Augusta, Delaware, and Point township. The sale of milk was ordered discontinued on three of these premises; on the other arrangements were made to have persons living outside the infected dwelling handle the milk products.

On March 19th I confirmed the diagnosis of three cases of scarlet fever in the R. family in Rush township.

Three schools were ordered closed until properly fumigated where members of families having the disease attended.

Measles:—Eighty-nine cases were reported, fifty-five of these occurring in Gearhart township. Three investigations were made for confirming diagnoses, one in Upper Augusta and two in Gearhart township.

Smallpox:—One case of smallpox developed in Shamokin. This man had been traveling through Snyder county, where there was considerable smallpox of a mild type, and later through sections of York county, but could give no history of contact with any one having a suspicious eruption. His movements from the probable time of infection were carefully checked up and no further cases were reported. The source of infection could not be determined.

Chicken pox:—Nine cases were reported during the year from eight townships. I confirmed householders' diagnoses in Shamokin, Upper Augusta, and Gearhart townships.

In September I investigated an outbreak of a suspicious skin eruption among school children in Delaware township. From such information as I was able to secure I concluded that the disease was impetigo contagiosa, although I did not find an active case.

Tuberculosis:—Eighty-seven cases were reported, eighty-four of these being reported from Mount Carmel township.

Statistical Summary of Work Done During the Year.

Forms 36 received,	192	Cases examined alleged to be:	
Forms 37 received,	195	Measles,	5
Dairy farms inspected for:		Scarlet fever,	5
Scarlet fever,	4	Mumps,	3
Typhoid fever,	5	Chicken pox,	3
Sale of milk stopped,	6	Smallpox,	2
		Schools ordered closed,	3
		Miles traveled by rail,	609
		Miles traveled by livery,	294

PERRY COUNTY.

Dr. A. R. Johnston, C. M. I. As County Medical Inspector I present the following report for the year 1914, of the work done in Perry County by the representatives of the Département of Health.

The townships of this county cover an area of about six hundred square miles and have a population of about sixteen thousand. The total number of communicable diseases reported was seventy-two; twenty-five cases of typhoid, sixteen cases of whooping cough, thirteen cases of diphtheria, and smaller numbers of mumps, tuberculosis, scarlet fever, chicken pox, and measles.

Twenty-five cases of typhoid fever were reported during the year, ten in Spring township, and the others were scattered with not more than three in any other township. Nine of the cases in Spring township were persons who lived upon the premises of B. F. D., or attended the Oak Grove School and drank from the well of Mr. D. On March 27th I investigated the conditions and made a census report of all the cases. The water supply was placarded and no more cases developed.

Thirteen cases of diphtheria were reported during the year. Eight of these from Penn Township and the others were scattered.

Six cases of mumps have been reported, two from Spring Township, two from Tyrone, and two from Tuscarora.

Sixteen cases of whooping cough were reported, eleven of which were in Carroll Township. Besides these there were three in Buffalo Borough, which were looked after by the health officer of District No. 681, because there was no local board of health in the borough.

Four cases of tuberculosis were reported, one from each of four townships.

Three cases of scarlet fever were reported, one from each of three townships.

Three cases of chicken pox were reported, no township reporting more than one case.

Two cases of measles were reported, from Penn Township, during the year.

Three dairy farms were inspected on account of typhoid fever. In two, arrangements were made for members of a neighboring family to look after the dairy and in the other it was arranged that a son should live in an out-house. One dairy farm was inspected on account of diphtheria and it was arranged that the milk would be fed to the pigs until the cows could be moved to a neighbor's.

One case was examined that was alleged to be diphtheria. Seventy-two Forms 36 were received and sixty-nine Forms 37 during the year. Five health officers were instructed

PIKE COUNTY.

Dr. William B. Kenworthy, C. M. I. I wish to report work done in Pike County during 1914 as follows:—

The general health of the community was very good throughout the entire year, with the exception of an epidemic of German Measles in Matamoras, which was brought over to us from Port Jervis, New York (directly across the river). There have been very few cases of contagious diseases. The Borough of Matamoras was in some trouble with its epidemic owing to the fact that although it had a regularly organized Borough Board of Health, there was no health physician, there being no physician resident in the Borough.

The Secretary of the Matamoras Board of Health notified me of the fact that there were a number of cases of contagious diseases accompanied by a rash among the school children, several of whom had been attended by physicians from Port Jervis, N. Y., and quite a few cases had no physicians at all. Inasmuch as the Port Jervis physicians had not reported any cases to the Matamoras Board of Health, and the diseases seemed to be spreading from day to day, he asked me to come up and make an inspection, which I accordingly did, and found quite a number of cases of German Measles. From the fact that several of the children had only been ill a few days and then returned to school—in some instances in less than a week—practically every child in the entire school had been exposed. I, therefore, directed the President of the School Board to close the school, keep it closed for two weeks, and have it properly fumigated before being reopened, which was done.

The only other case of any considerable importance was a case of smallpox in Bloomingrove Township in September. A Mrs. John V., who had been visiting her sister who lives in Scranton, developed smallpox ten days after returning to her home in Bloomingrove Township. The case was exceedingly mild in character, although typical smallpox. The history of this case is quite interesting from the fact that she was the only member of her own immediate family who had never been vaccinated. Her two children had, of course, been vaccinated within the last few years in order to be admitted to school; her husband had been vaccinated eight or ten years ago; she "did not believe in vaccination" and therefore suffered the consequences. The house was placed under absolute quarantine and there were no other cases.

POTTER COUNTY.

Dr. E. H. Ashcraft, C. M. I. In making my Annual Report for the year 1914, I am pleased to report a very great reduction in the number of contagious diseases, particularly in comparison with that of about ten years ago when Typhoid Fever prevailed very generally.

The campaign of Education carried out by the State Department directly as well as through its various agencies has borne fruit.

The economic value of this more than compensates for the expenditure and makes it a wise investment on the part of the State.

People are observing quarantine much better than they did a few years ago.

The number of contagious diseases reported during the year are as follows, to which I add also a list of them for the year 1913 for comparison.

	1913	1914		1913	1914
Chicken pox,	3	7	Typhoid fever,	16	7
Measles,	116	14	Tuberculosis,	1	3
Mumps,	24	14	Whooping cough,	0	32
Diphtheria,	5	10	Erysipelas,	2	2
Scarlatina,	4	4			

An epidemic of whooping cough has existed through the County in various places, but at no place has it prevailed extensively, being so mild in many cases that it was not recognized until some of the victims developed pronounced symptoms.

Typhoid fever, once so common, has been reduced to a very small number, but seven reported during the year.

On the whole I feel proud to submit this report.

SCHUYLKILL COUNTY.

Dr. L. T. Kennedy, C. M. I.

Statistical Summary of Work Performed During the Year 1914.

Forms 37 received,	752	Examined cases alleged to be:	
Forms 36 received,	709	Smallpox,	2
		Chicken pox,	56
Dairy farms inspected for:		Whooping cough,	9
Typhoid fever,	7	Measles,	75
Scarlet fever,	10	Mumps,	13
Diphtheria,	12	Impetigo contagiosa,	10

Sale of milk stopped from 19 premises.

Schools ordered closed, 21.

Reason:—Chicken pox, diphtheria, measles, scarlet fever, whooping cough and mumps.

Miles traveled by livery, C. M. I.,	473 miles
Miles traveled by livery, deputies,	781 miles
	1,254 miles
Borough investigations,	6
Prosecution,	1

The total area of this County is about 777 square miles, divided into twenty-eight boroughs and thirty-six townships, with a total population of 207,894 according to the 1910 census, the latest figures obtainable. The total population of the townships, excluding the boroughs, is 79,894, which, together with Girardville Borough, which has been under the jurisdiction of the County Medical Inspector for the past two years, makes a total of about 85,000 directly under this office.

Cases properly reported by physicians will not be treated in this report, as the Department office at Harrisburg have more complete data on such cases, and it is our purpose to only give a general résumé of the various diseases and touch on only such individual cases or epidemics as are likely to be of interest or instructive because of some unusual features or incident connected therewith.

During 1914 there was an approximate total of 675 premises under quarantine for contagious disease. Of the communicable diseases, there were fewer premises quarantined for typhoid fever than for any other. Thirty-one houses were placarded for typhoid fever compared with about two hundred for diphtheria and about ninety for scarlet fever. Measles were predominant with two hundred and forty premises, the nearest to this total being diphtheria.

Each year shows a decrease in the number of deaths from communicable disease, and when the fact that the above figures represent the families afflicted out of a total population under the jurisdiction of this office of about 85,000, a large part of which is foreign born, the increasing efficiency of the Health Department is apparent.

Tuberculosis is not included in the above figures, as premises are not placarded for this disease, and consequently it cannot be included in our records.

We will take up the work of this office as it relates to the various inspections and action taken on account of the several diseases, separately, not taking into account cases regularly reported by physicians, but only those where special investigations by this office were necessary.

Typhoid Fever:—It is a source of satisfaction to me to be able to state that the number of cases of this disease is being reduced each year.

This disease existed on but thirty-one premises under the jurisdiction of this office during 1914, out of a total population of about 85,000 (under this office). Inasmuch as this number includes all territories outside of boroughs, it should be borne in mind that a great majority of these persons do not get water from a public supply, where it is watched carefully for evidence of pollution, but from wells, springs, etc., and the remarkably few houses afflicted, speaks volumes for the educational feature of our inspections and the pamphlets left by Health Officers.

Every case of typhoid fever reported results in careful inquiry into the condition of the water supply, and where the least suspicion arises, the water is analyzed and the householder instructed as to the proper precautions to be taken. This policy has been followed for a number of years and the results are highly gratifying as the foregoing figures indicate.

There was no epidemic under this office during the year, the cases reported being all scattered.

Quite a serious epidemic occurred in the Borough of Tower City, which will be taken up under the head of *Boroughs*.

This office had no occasion during the year to make any inspection on account of this disease, other than on dairy farms, which will be treated under that head.

Where a previous investigation has been made by this office in former years for an epidemic of this disease, there has been no recurrence of the epidemic. As an instance of this:—during 1913 inspections were made in Beckville, North Manheim township, and Nuremberg, North Union township, and during 1914 there were no cases in Beckville, and only one or two scattered cases in North Union township, outside of the district covered by our 1913 inspection.

Scarlet Fever:—No inspections were made by this office to discover cases of scarlet fever not under the care of a physician, although we are constantly on the alert for mild ambulatory cases, which are often the cause of the spread of the disease. This office was called on for information and assistance in an epidemic in Gordon Borough, which will be enlarged upon under *Borough Epidemics*.

This disease occurred in about ninety families under the jurisdiction of this office during 1914, but only one serious epidemic occurred, at Sheppton and Oneida, East Union township, among the foreign population there. The majority of the cases were mild and were scattered throughout the County and only two schools were closed on account of the disease (See *Schools Closed*).

During October, notices appeared in a newspaper regarding an epidemic of scarlet fever in Trenton, Delano township, but investigation by our Health Officer disclosed the fact that but one case existed

and that there was no suspicion whatever of other cases in the neighborhood, and our Health Officer's inquiries among physicians in the neighborhood confirmed the above information.

Diphtheria:—About two hundred families were afflicted with this disease in 1914, scattered among the several townships, with but one serious epidemic, at Valley View, West Hegins township, which was practically stamped out after several inspections by this office. These schools, churches, etc., were closed and disinfected; all bakers, butchers, milk-dealers, etc., carefully looked up and while, nearly all the cases were very mild, it was difficult to locate the source of the contagion. The disinfection of the schools checked the outbreak, but scattered cases were reported from time to time afterwards, although all were mild and never more than two or three occurring at one time.

No inspections were made by this office to investigate suspicious diphtheria cases, as a physician was practically always called in and the cases reported through the regular channels, but we made one inspection of quarantine violation in Blythe township in March, and after strict warning was given the householder no future violations were reported. Seven schools were closed on account of diphtheria during 1914, all of which will be given further attention under *Schools Closed*.

During May, complaints were made to this office regarding violation of diphtheria quarantine in Blythe township, by a Mrs. D., and an investigation by our Health Officer confirmed the information, but after full instructions had been given this woman and a strict warning issued her there were no further complaints of this nature.

Smallpox:—No cases of smallpox were reported to us in the regular manner under the jurisdiction of this office, but two inspections were made by the C. M. I. on account of this disease. One case occurred in the Borough of Coaldale during May, which will be taken up under *Borough Epidemics*.

During January, your inspector went to Girardville Borough to inspect a suspicious case of smallpox, but after a thorough examination, established a diagnosis of chicken pox. During May, 1913, we had a few cases in this County arising from the passage of an infected circus through this territory, several of whose employees were afflicted, but I am glad to say that all danger of infection from this source was stamped out by the measures taken in 1913 and the successful cooperation of several deputies, and there was no connection between the only case in 1914 and those of the previous year, and am able to report the non-existence of the disease under this office.

Chicken Pox:—Fifty-six suspicious cases were examined by the C. M. I. and deputies during 1914, but the only epidemic of any consequence occurred at Muir, Porter township. Our deputy, Dr. Hawk, of Tower City, examined twenty-eight suspects at that place during November, but most of them had recovered at the time of his in-

spection. There were about fifty-five families afflicted during 1914, scattered throughout the entire county. Three schools were closed on account of this disease (See *Schools Closed*).

Measles.—A total of seventy-five alleged cases of measles were examined by this office during the year; this disease, as usual, being more common than any other, having been present in about two hundred forty families during the year. The majority of the seventy-five cases examined by our office were voluntarily reported by householders; and, doubtless, a number of very mild cases where no physician was called in were never brought to our attention.

There were three epidemics during the year requiring investigation by this office. One in Walker township during June, where Dr. Fleming examined sixteen suspects. One at Sheppton and one in Oneida, East Union township, during April, where our deputy examined nineteen and sixteen suspects, respectively, the other inspections being for scattered cases. Five schools were closed for this disease during the year (See *Schools Closed*).

Mumps.—Thirteen cases suspected to be mumps were investigated by the C. M. I. and deputies during the year 1914, practically all being voluntarily reported by householders. It is very probable, however, owing to the mildness of this disease, that a number of cases existed for which no physician was called in and which were never reported to this office. Two schools were closed for this disease during the year.

Whooping Cough.—Only two cases of this disease were investigated by this office during the year 1914, these being cases where the householder refused to admit the existence of the disease, and it was necessary to have a physician examine them on account of school attendance. Inasmuch as our Health Officers are allowed to accept a form 34 from the householder in cases of whooping cough and it does not require checking of diagnosis by a physician, the number of inspections for this disease are necessarily very small; together with the fact that (except in very severe cases) the majority of people do not take this disease seriously and conceal it wherever possible. This disease was reported present in about forty families under the jurisdiction of this office and two schools were ordered closed on account of same.

Impetigo Contagiosa.—During January, information reached this office of a number of suspicious cases of this disease, and an investigation by our deputy, by order of the Department, in Rock, Washington Township, among the school children, disclosed ten cases of this disease in existence, and no other inspections were made during the entire year for this disease.

DAIRY FARMS.

Typhoid Fever.—Seven dairy farms were investigated by this office for typhoid fever during 1914; two in Mahantongo township, one in

Hegins township, one in Brunswick township, one in Pine Grove township, one in West Penn township, and one in North Union township. The sale of milk and its products was stopped in four cases, satisfactory arrangements were made to continue the sale in two cases, and in one instance it was found that no sale had taken place, the dairy business having been discontinued a short while before the disease appeared.

Careful investigation of the water supply is made in each case of typhoid fever, and the disposition of stools, etc., is given particular attention. Where the conditions warrant, the water supply is analyzed and the householder given necessary instructions as to purifying and protecting the water supply, all of which has tended towards decreasing the number of typhoid fever cases.

Scarlet Fever:—Investigations were made on ten dairy farms on account of scarlet fever; one in Mahantongo township, one in East Brunswick township, three in West Penn township, two in Butler township, one in Blythe township, and two in Wayne township. The sale of milk and its products was stopped in eight cases and proper precautions having been enforced by this office, the sale was allowed to be continued in two cases.

Diphtheria:—Twelve dairy farms were inspected on account of this disease, one in Union township, three in West Penn township, five in Hegins, one in Walker, one in Hubley, one in Pine Grove township, and the sale of milk and its products was stopped in six cases and allowed to be continued in six cases, under the regulations of the Department of Health, as the householder had been given thorough instructions and all precautions taken to safe-guard the users of the dairy products.

One investigation was made during January, of a general store at Branch township, where diphtheria existed, and the householder was given a disinfecting bath, had his clothing disinfected, and took up his residence elsewhere, the store-room being sealed from the rest of the house. During an investigation by the C. M. I. in November, a trip was made to a general store in Hubley township, where diphtheria existed, and similar arrangements were made and we had no complaints of any nature from either case.

An interesting feature of our work among the dairy farms is the attitude of the various householders and I am very glad to say that in practically all cases they are perfectly willing to obey the regulations of the Department and to suffer pecuniary losses rather than take any chances of spreading the disease, and in several instances I found that every possible precaution had been taken before my visit, to prevent the infection of others by means of the sale of milk and its products.

SCHOOLS CLOSED.

We shall, of course, only take up under this heading such schools as were closed on account of contagious disease, by order of this office. Several schools were closed on account of contagious disease by the several school boards before action was ordered from this office, and these will not be included here although I am glad to be able to state that the number of instances of this kind is increasing.

Twenty-one schools were closed during 1914 by order of this office on account of the attendance at school of pupils while afflicted with a communicable disease or pupils who were contacts of such cases, distributed as shown in the attached statement. All the schools mentioned are in the townships, although the schools in Coaldale Borough and Gordon Borough were also closed on account of contagious disease. This action was taken by the school boards following the example set by this office in a previous investigation. Seven schools were closed for diphtheria, compared to five for measles, the highest for any other disease. In every case where the schools were closed the number of cases decreased very suddenly, with a possible exception of Valley View, where scattered cases were reported from time to time after the schools were closed, and here further infection was due to the fact that practically all the cases were so mild that quarantine was unintentionally violated. In connection with this, I am glad to report that the use of the common drinking cup and bucket is gradually becoming a thing of the past, and as soon as it is eliminated, I believe the number of cases contracted through school attendance will show a considerable reduction.

A very serious feature of this work, however, is the fact that very few rural school officials or teachers show any knowledge whatever of the Health laws as set forth in the School Code, or else willfully disobey them, and we have on file records of several instances where children were allowed to continue at school while showing evidence of scarlet fever, chicken pox, or measles, and where the school officials were apprised of this fact and took no action to prohibit such attendance. Unless these teachers are required to be fully acquainted with that part of the School Code relating to Health regulations, and forced to obey them, it will be a useless matter to disinfect the school-rooms if they are immediately reinfected by the neglect of the officials and teachers.

I am glad to report, however, that we have had no trouble whatever with any school board over the closing of a school, and all instructions from this office were promptly complied with in that respect. There are several school districts in this County, notably Mahanoy, where the Health precautions taken are of a very high order, and where it is very seldom necessary for this office to issue any instructions whatever.

BOROUGH EPIDEMICS.

Girardville:—This Borough is still under the jurisdiction of the State Health Department, no Board of Health having been organized, and the C. M. I. made an investigation of a suspicious smallpox case in January, in which a diagnosis of chicken pox was established.

Coaldale:—During the month of May, a case of smallpox in Coaldale Borough required the attention of this office and your Medical Inspector made two visits there to diagnose the case and to see that the necessary precautions were being carried out, and I am very glad to report that the disease was held to one case, and in this connection wish to say that the Health Board cooperated in every way and had done excellent work before my visit to this place.

Tower City:—A very serious epidemic of typhoid fever occurred in Tower City and vicinity during October, and two inspection were made by this office, under instructions from the Department. Our work, however, was confined principally to locating the source of the disease in the neighboring townships, as several other representatives of the Department of Health were on the ground in Tower City and had charge of the matter at the time of our inspection.* There were a number of very serious cases, some of which resulted in death, and for a time it was thought that the public water supply of the town was polluted, but thorough investigation revealed the fact that the disease was due to a case of typhoid fever, on a dairy farm, in the township, which was never reported by the attending physician. A later case occurred on these premises which was reported after considerable delay, and it was through this later case that the original case was disclosed. Every measure, prompt and drastic, was taken to suppress the sale of this milk, and follow up the milk route, and the violence of the epidemic decreased considerably, only scattered cases being reported thereafter.

Gordon:—During March, an epidemic of scarlet fever occurred in Gordon Borough and an inspection was made by the Medical Inspector, who met the local Board of Health, and after going over the situation with them gave them full instructions as to the measures to be taken to combat the disease, which, fortunately, was principally in a mild form and while a number of cases occurred, they were not serious and after the instructions from this office were put in effect, the number of cases decreased. We have had no further trouble in that section.

A previous epidemic in this Borough had taken place during December, 1913, which was not handled properly, and I am of the opinion that the epidemic during March was due to some extent to the lax methods pursued in the previous cases.

*Other details regarding this epidemic may be found among the special reports of the Division of Medical Inspection and in section 31 of the report of the Division of Sanitary Engineering.

We are continually receiving telephone calls and letters from Health Officials of the Boroughs and endeavor to assist them in every way possible. Very few Boards of Health seem to realize their power and are reluctant to take drastic action because of the fact that they do not realize the responsibility and the power of a Board of Health in an epidemic, although I am glad to say that where this office has made investigations and impressed upon the Board of Health the necessity for strict precautions, they are considerably more efficient under similar circumstances in future cases.

PRECAUTIONS.

During May, a diphtheria patient in West Penn township deliberately violated quarantine, after having been warned not to do so by our Health Officer. The matter was taken up with the Department with the recommendation to prosecute and the offender was arrested on May 20th and at a hearing before a Justice of the Peace, the same date, he pleaded guilty and was fined fifty dollars and costs, a total of \$64.98. It was deemed advisable to push this case, owing to the fact that there had been a number of other cases in that territory where violations of quarantine were suspected and an object lesson was necessary.

NUISANCES.

Only one nuisance was reported during 1914, in Rabn township, and that consisted of improper drainage. The matter was referred to the Department and handled direct from the Engineering Division.

GENERAL REMARKS.

The foregoing report is a brief synopsis of the work of this office during the year and full details of all particular items are on file at this office and can be furnished upon request, although complete reports of all inspections of any nature whatever were filed with the Department at the time the work was done.

As a natural result of experience and continued instructions, our Health Officers are gradually becoming more efficient and I could not close this report without some testimonial as to the excellent work of the majority of our Health Officers. With a very few exceptions, I am glad to say that we have a most faithful and efficient corps of Health Officers in this district and receive surprisingly few complaints regarding the conduct and actions of these men.

Several years ago we began to require all Health Officers to insert on all forms 36, the date of the last attendance at school of the patient and the other children in the family, and this information has been the means of keeping us thoroughly posted regarding the effect of school attendance on the spread of disease.

The several condensed statements attached to this report give accurate records of the year's work and enable any one to see at a glance the work done in this County during the year. While no records of the number of deaths is kept at this office, there is no doubt in my mind that the number of fatal cases of communicable disease is decreasing each year, as the great majority of cases coming to our notice are of a mild nature.

Feeling that on account of other duties I am unable longer to devote the necessary time to those of County Medical Inspector, I am about to resign that position.

As this is my last annual report, I take the opportunity to express my hearty appreciation of the many courtesies of the various officials of the Department. I stand ready at any time to assist in any way the life-saving work of the Department of Health, conducted so admirably that it stands forth as a star of guidance not only to the Commonwealths of the United States, but to the world.

SCHOOLS ORDERED CLOSED FOR VARIOUS DISEASES—1914.

Townships.	Chicken pox.	Diphtheria.	Scarlet fever.	Whooping cough.	Mumps.	Measles.	Totals.
East Brunswick, .....	.....	.....	.....	.....	12	.....	12
Porter,	1	.....	.....	.....	.....	.....	1
Hegins, .....	.....	4	.....	.....	.....	.....	4
Upper Mahantongo, .....	.....	.....	.....	12	.....	.....	12
East Union, .....	.....	.....	.....	.....	.....	4	4
Rush, .....	.....	1	.....	.....	.....	.....	1
New Castle,	1	1	.....	.....	.....	.....	2
North Manheim,	1	.....	.....	.....	.....	.....	1
West Penn,	1	1	1	.....	.....	1	4
Butler, .....	.....	.....	1	.....	.....	.....	1
Totals,	3	7	2	2	2	5	21

INSPECTION OF CASES ALLEGED TO BE:—

Month.	Smallpox.	Typhoid fever.	Chicken pox.	Whooping cough.	Measles.	Mumps.	Impetigo contagiosa.	Totals.
January,	1	.....	15	.....	.....	.....	10	26
February, .....	.....	.....	4	.....	.....	.....	.....	4
March, .....	.....	.....	.....	.....	12	.....	.....	12
April, .....	.....	.....	.....	.....	13	.....	.....	13
May,	1	.....	5	9	.....	.....	.....	15
June, .....	.....	.....	.....	.....	16	.....	.....	16
July, .....	.....	.....	.....	.....	.....	.....	.....	.....
August, .....	.....	.....	.....	.....	1	.....	.....	1
September, .....	.....	.....	.....	.....	.....	.....	.....	.....
October, .....	.....	.....	.....	.....	.....	.....	.....	.....
November, .....	.....	.....	28	.....	.....	4	.....	32
December, .....	.....	.....	12	.....	3	9	.....	14
Total,	2	0	66	9	75	13	10	165

DAIRY FARMS INSPECTER FOR:—

Month.	Diphtheria.	Scarlet fever.	Typhoid fever.	Totals.
January,	0	1	0	1
February,	3	1	0	4
March,	3	4	0	7
April,	0	1	0	1
May,	1	2	1	4
June,	1	1	1	3
July,	0	0	1	1
August,	0	0	0	0
September,	0	0	0	0
October,	1	0	4	5
November,	2	0	0	2
December,	1	0	0	1
Totals,	12	10	7	29

SNYDER COUNTY.

Dr. H. F. Wagenseller, C. M. I. In accordance with your request, I herewith submit the following report of the Medical Inspection work done in Snyder County in 1914.

The Medical Inspection work for the year 1914 has been somewhat varied and extensive. We have had epidemics of measles in Monroe and West Beaver townships; chicken pox in West Beaver township; scarlet fever in West Beaver and Monroe townships; smallpox in Perry, West Perry, Chapman, and Washington townships; and some diphtheria in Perry township. All of these epidemics originated in the schools, which were ordered thoroughly disinfected. The cases were all of a very mild type and, in the great majority of the cases, no physician had been in attendance, and the belief of the older people that the children must have all of these diseases, had allowed them to spread extensively. After inspection and the establishment of quarantine, the epidemics were soon checked.

Upon the receipt of word from West Beaver township, on February 23, that a contagious disease existed in that township and no doctor was in attendance, I made an inspection and found quite a number of cases of a mild type of chicken pox and some cases of measles. I at once sent word to the Health Officer and established a quarantine for all the cases and ordered the school-houses disinfected.

On March 25 I received word from the Chief Medical Inspector, that he had information from Monroe Township that a contagious disease existed in the schools at Shamokin Dam. I immediately investigated the matter and found twelve cases of measles and scarlatina among

the children there. These cases were reported to the Health Officer for quarantine and the schools ordered closed until disinfected.

On May 24, upon the receipt of word from the Chief Medical Inspector, that a disease reported to be smallpox existed in Perry Township, I proceeded to Mt. Pleasant Mills to investigate the matter. I diagnosed the disease as smallpox and to satisfy the doubts of the inhabitants I sent a call to the Associate Chief Medical Inspector, who, after proper investigation, confirmed the diagnosis. This disease, on account of its mild and atypical form, had spread over quite a section of the country, *i. e.*, West Perry, Perry, Chapman, and Washington townships. I deputized Drs. Longacre and Rothrock to assist in vaccinating the contacts and, in all, a hundred and sixty-seven contacts were vaccinated. Day and night guards were placed on duty over each case. The last case was released from quarantine on July 22.

On November 9, I received word from the Chief Medical Inspector, that a contagious throat disease existed in the schools of Shamokin Dam, Monroe Township, and upon investigation I found the disease to be mumps. The cases were all placed under quarantine and the school-house ordered closed until disinfected.

On November 27, I received word from Dr. Long of Freeburg, requesting that I go to a house near Meiserville to make a diagnosis in a suspected case of diphtheria. Upon examination I made a diagnosis of diphtheria, administered antitoxin to the case and four other members of the household, and established quarantine.

SOMERSET COUNTY.

Dr. Charles P. Large, C. M. I. Somerset County has an area of nearly 1,050 square miles and is divided into twenty boroughs and twenty-four townships. The population is approximately seventy thousand. That of the boroughs is about twenty-five thousand, leaving a population of about forty-five thousand in the townships under the supervision of your County Medical Inspector and thirteen Health Officers. Many of the boroughs are small and have no local Boards of Health, or very inefficient ones. Some of them have no physician residing in the borough limits, hence a full Board of Health in these municipalities is impossible; in others, the local physicians are unwilling to serve on the boards.

In my routine work during the year 1914, I have visited twenty of the twenty-four townships and three of the boroughs. A distance of 1,442 miles was traveled by railroad and 3,142 miles by livery.

During the year 832 reports of placarding for communicable diseases were received from the thirteen health officers and 616 disinfections were reported.

Thirteen different diseases were reported, a brief summary of which follows:—

Chicken Pox:—Forty-eight cases were reported, a decrease from 1913. These occurred in Summit, Paint, Somerset, Jefferson, Elk Lick, Brothers Valley, Lower Turkeyfoot, Jenner, Shade, Quemahoning, and Larimer townships, and in Somerfield borough. Twenty-two of these were diagnosed by the C. M. I.

Diphtheria:—Two hundred and forty-three cases were reported from eighteen townships and one borough, an increase over 1913. Fifty-two of these cases were inspected and diagnosed by the C. M. I.

Erysipelas:—Seven cases; an increase over 1913.

Measles:—A hundred and forty-three cases; thirty of which were diagnosed by the C. M. I. A decrease from 1913.

Mumps:—Eleven cases, seven of them diagnosed by the C. M. I. A decrease from 1913.

Scarlet Fever:—Ninety-two cases, forty-four of them diagnosed by the C. M. I. Increase over 1913.

Smallpox:—Twenty-five cases were reported. All of these were seen and diagnoses confirmed by your C. M. I. Premises wherein cases were located were placed under absolute quarantine with day and night guards. A decrease from 1913.

Tuberculosis:—Four cases were reported. None of these were admitted to Dispensary No. 30. All admitted to dispensary were reported to Division of Dispensaries separately and in detail. A decrease from 1913.

Typhoid Fever:—Sixty-seven cases were reported. Twelve were inspected by the C. M. I. and the diagnoses confirmed. Whenever cases were found on premises where dairy products were marketed the proper advice was given concerning the avoidance of carrying infection. A decrease of about half from 1913.

Whooping Cough:—A hundred and fifty-seven cases were reported, of which seventeen were inspected by the C. M. I. A hundred and seven of these cases occurred in an epidemic in Lower Turkeyfoot township. An increase over 1913.

Pneumonia:—One case was reported, the same as in 1913.

Measles:—A hundred and forty-three cases were reported, and four of them were seen by the C. M. I. A decrease from 1913.

Aside from the above details the work covered various other diseases.

In January an inspection was made in Hollsopple school in Cone-
maugh school township where one case of Impetigo Contagiosa and
eight cases of nits and lice were found among the pupils. These
pupils were excluded from school until all traces were removed.

An epidemic of measles occurred in Summit township, in which
twenty-eight cases were diagnosed, it being in the Lick Run and Cross
Roads schools. These schools were closed and the School Board noti-
fied to have them fumigated before reopening.

Favus, Chicken Pox, and Whooping Cough demanded attention in
Lower Turkeyfoot township during the same month.

During the month of February the Cross Roads school was found
to contain cases of Impetigo Contagiosa. These were excluded.

Smallpox demanded much attention. An epidemic of no small
proportion obtained in Elk Lick township. The infection was
brought from Maryland and the first cases being of a light form
were not placed at once under the care of a physician. Several fami-
lies contracted the disease owing to the carelessness of the families
who were first affected by sending children to the Springs schools
and entertaining guests in their homes during the illness of the pa-
tients. The schools were closed and remained closed for about a
month; all contacts were searched out and vaccinated, and here I
wish especially to commend Dr. A. M. Lichty, of Elk Lick, for the
splendid assistance rendered your C. M. I. in this general vaccination
crusade in a community in which vaccination was by no means in
general favor. This epidemic was transmitted to Conemaugh town-
ship in the extreme north of the County by visitors, and there the
same activity became necessary. Vaccination was there made gen-
eral in the Thomas Mills district, there being several smallpox cases
and many contacts. The Thomas Mills school was closed, owing to
the general contact caused by the patients in school and the teacher's
boarding in an infected family. Here I may add that the antagonism
to vaccination was probably more marked than in Elk Lick township.
The school-teacher herself refused to be vaccinated and later con-
tracted smallpox. Dr. H. A. Zimmerman, the Health Officer for
Conemaugh township, rendered excellent assistance by both word and
act in persuading the contacts of the truth concerning vaccination.
I wish to note here that of the sixty-odd cases of smallpox not one
had ever been vaccinated successfully, and of the hundreds of con-
tacts vaccinated by Dr. H. A. Zimmerman and Dr. A. M. Lichty and
your C. M. I. not one contracted smallpox, although patients had
attended schools and churches in these two townships while the
eruption was present. In Elk Lick township the towns of St. Paul,
Coal Run, and Boynton also had cases of smallpox at a later date, and
there also a general vaccination was carried out with uniformly
satisfactory results. In this epidemic the Sandy Hollow and Hand-

werk schools were closed, owing to contacts having been at school and for the further precaution of prevention spread of the epidemic owing to the congregation of people. The school boards were unanimously with us in all cases, and rendered most efficient aid. In February, diphtheria, chicken pox, whooping cough, and scarlet fever in Summit township required attention.

In March, smallpox in Elk Lick, lice and impetigo contagiosa in Paint, and smallpox in Shade, and whooping cough in Lower Turkeyfoot townships were inspected and diagnoses made and confirmed.

April brought similar duties for smallpox in Elk Lick, whooping cough in Conemaugh, scarlet fever in Somerset, and smallpox in Shade townships.

In May inspections were made for diphtheria in Lincoln, scarlet fever in Lower Turkeyfoot, whooping cough in Greenville and Lower Turkeyfoot townships.

June. Inspections were made for measles in Shade township—an epidemic of seventeen cases. This epidemic was clearly due to the neglect of one physician in reporting his findings. Detailed report was made to your office at the time.

In July, measles in Quemahoning township called for inspection.

In August, typhoid fever in Middlecreek township was inspected and directions given concerning conducting the case in a sanitary manner. No other cases developed. Diphtheria broke out at Keystone mines in Summit township among foreigners and received no medical attention until two of the children had died and many more were ill. The people of this locality were very poor and unable to procure medical attention. Your C. M. I. took it upon himself to render such as he could. All contacts were given immunizing doses of antitoxin and all houses having cases were placed under absolute quarantine. The Board of Poor Directors were notified and food stuffs were supplied where found necessary.

September. A few cases of typhoid fever in Jenner township were inspected and some in Somerfield borough. Scarlet fever in Larimer township and Wellersburg borough and Upper Turkeyfoot township demanded attention as did diphtheria in Larimer township.

October. Inspections were made for diphtheria in Elk Lick township and typhoid fever in Addison, scarlet fever and diphtheria in Southampton and scabies and diphtheria in Northampton and chicken pox in Shade township.

November. Scarlet fever was inspected in Middlecreek and Greenville townships, diphtheria in Paint and Jenner townships and Elk Lick and Shade townships, and mumps in Somerfield borough. The necessary action was taken at each of these inspections.

December. Inspections were made in Conemaugh and Elk Lick townships for scarlet fever, and in Summit township for diphtheria.

The detailed reports of each inspection above noted were sent to your office soon after it was made and your letter of approval anxiously awaited.

During the year the duties of your C. M. I. were made pleasant in most instances by the cheerful assistance rendered by the health officers and the local physicians. A few instances occurred in which inspections were made where householders seemed to feel that they were being imposed upon, but in each such instance one could easily attribute such feeling to ignorance of the purpose.

It was the intention and earnest effort of your C. M. I. to render aid and prompt attention whenever possible and when errors did occur they were not intentional.

During the year interviews with members of borough boards of health were frequent and advice given was cheerfully received and followed.

Your C. M. I. for Somerset County wishes particularly to thank Dr. Dixon and the members of his official staff for the courtesies and advice given on many occasions.

SULLIVAN COUNTY.

Dr. J. L. Christian, C. M. I. The following is a summary of reports for the year 1914.

Thirty-four cases of communicable diseases were reported during the year as follows:

Measles,	13	Scarlet fever,	4
Diphtheria,	9	Erysipelas,	1
Typhoid fever,	7		

Of the typhoid fever cases, one came from Grove City, one from Pittsburgh, and all others were in different localities prior to the disease. Probably no case originated in the county. No special inspections were made as we did not find any necessity for them.

Forms 36 received during the year,	34
Forms 37 received during the year,	20

SUSQUEHANNA COUNTY.

Dr. H. B. Lathrop, C. M. I. During the year 1914 Susquehanna County was, with the exception of measles, comparatively free from communicable diseases, and those that made their appearance were kept within bounds. The Health Officers were active and efficient, as a rule, and did good work towards limiting the spread of disease.

Typhoid Fever.—Typhoid fever made its appearance in different parts of the County during the year; there being nine cases in all. I enforced the regulations concerning the sale of milk in one case.

Scarlet Fever.—Scarlet fever in a mild form has been rather prevalent in some sections, and on account of the mild type has been somewhat difficult to control, the householders finding much fault with the quarantine regulations, especially in having the children kept out of school for sixty days. In one case where there was violation of quarantine by members of the family, I established absolute quarantine, appointed a guard and had no more trouble.

I ordered one school closed in Rush township on account of scarlet fever, one in Bridegwater and one in Dimock, and the buildings disinfectected.

Scarlet fever having been rumored to exist at C. E. Shay's and George Decker's, both living in New Milford township, with no physicians in attendance, I investigated by deputy, found the report to be true, and established quarantine.

I investigated the marketing of milk in a number of cases and established the usual restrictions.

Diphtheria.—I had reports of nineteen cases. In four instances milk was sold and I enforced the usual restrictions. I ordered the school at South Auburn closed and the building disinfected.

Measles.—This disease was epidemic throughout a great part of the County.

In September I received a telephone message from the Health Officer of Harford township that he was having trouble in maintaining quarantine and urgently requesting me to visit certain places. I immediately drove over and found a number of dissatisfied persons. There were others who refused to sign card 34, admitting the existence of the disease. I visited these families, confirmed the Health Officer's diagnosis, established quarantine, and explained the necessity of observing the rules of the Department. The Health Officer had no more trouble after this, but the disease was so thoroughly diffused that there were over a hundred cases in the neighborhood.

There was an epidemic of measles in Springville township in January and February—about one hundred and fifty cases in all. As in the beginning of the epidemic the Springville school became infected, I ordered it closed and it was kept closed for five weeks, the majority of the pupils having the disease during that time. The Health Officer looked up all cases not under the care of a physician, and I verified the diagnosis in thirty-four instances in this township.

I ordered schools closed and the buildings disinfected, on account of measles, at Gibson, South Gibson, Harford, Springville, and Bridgewater.

The physicians of Susquehanna County I think, as a rule, report all of their cases of communicable diseases, with the exception of the minor diseases such as mumps, etc. I do not think these are reported as they should be.

Statistical Summary of Work During the Year 1914.

Forms 37 received,	362	Cases examined alleged to be:	
Forms 36 received,	543	Scarlet fever,	2
Schools ordered closed on account of scarlet fever,	3	Measles,	97
Diphtheria,	1	Whooping cough,	9
Measles,	5	Chicken pox,	5

TIoga COUNTY.

Dr. C. W. Webb, Acting C. M. I. I beg to submit the following summary of work done in this county during the year 1914.

Of the thirty-five diseases requiring report to the State Department of Health, only nine were brought to the attention of this office for special investigation. In making these investigations it was necessary to travel 624 miles by railroad and 1,164 miles by livery.

Typhoid Fever:—During the year eleven dairy farms were inspected on account of the existence of typhoid fever. These were scattered throughout various sections of the county, no particular source of infection being determined. On two of the farms typhoid had previously existed and samples of the water supplies were sent to the State Laboratory for analysis. On four farms the sale of milk was discontinued until after disinfection of the premises, in all other instances the milk products were handled entirely by persons living outside the infected dwelling. No secondary cases were reported.

On June 10th your inspector investigated a threatened outbreak at Blackwell's in Morris Township, a village having a population of about seventy-five persons. Two cases were examined and the prem-

ises inspected, in both of which the conditions were extremely unsanitary. A general clean up was advised, with liberal use of unslaked lime in outhouses, etc. Samples from several suspected water supplies were forwarded to the Laboratory for analysis.

In June a family outbreak occurring in a cheese factory at Three Spring Run, Morris township, was investigated. The family lived in one end of the building containing the factory. Three cases were found. The patients were removed to a hospital, the factory was thoroughly disinfected, and another person was placed in charge of the work.

It would seem that the preventive measures of the Department were well observed and it is gratifying to note that no secondary cases were reported from any of these outbreaks. During the year a total of forty-one cases were reported from the districts coming under my jurisdiction.

Scarlet Fever:—Fifty-eight cases were reported during the year. In the early part of the year several outbreaks of a mild type occurred in Gaines, Delmar, and Morris Townships. These cases were so mild, in most instances having a duration of only a few days, that no physicians were in attendance, consequently, no cases were reported and the infection was soon spread through the schools. Some thirty cases were examined and where diagnosis could be established quarantine regulations were enforced.

Three investigations were made in Gaines township, one in Morris. In each instance where pupils were taken ill while in school the school rooms were ordered closed for disinfection.

• Eight dairy farms were inspected on account of the existence of scarlet fever, on all of which the sale of milk was temporarily discontinued until arrangements could be made to have it handled by persons not entering the infected dwelling, or until the premises were disinfected and the quarantine lifted.

During October school outbreaks occurred in Middlebury and Delmar townships. Schools were closed during the incubation period and ordered disinfected before reopening.

Diphtheria:—Five cases were reported during the year. In January I inspected a dairy farm in Brookfield township, where two cases occurred. Regulations were established for the sale of milk and all precautions were strictly observed.

Measles:—Measles were reported in Bloss, Middlebury, Tioga, and Jackson townships. In all cases reported by the householder or health officer, where no physician was in attendance, the diagnosis was confirmed by your inspector. A total of fifty-four cases were examined during the year.

Mumps:—This disease was reported from but two townships during the school year, Bloss and Liberty.

Chicken Pox:—Reported from Bloss and Jackson townships. Seventeen cases were reported during the year.

Tuberculosis:—Two reports reached me that children suffering with tuberculosis were attending school. In each instance the entire family were examined and those found to be suffering with the disease were excluded from school and advised to go to Mount Alto for treatment. One dairy farm was inspected, complaints from neighbors having reached me that milk was being handled by persons suffering with tuberculosis. Directions were given in regard to the handling of milk products and the patient was removed to a Sanatorium.

Smallpox:—On about the 12th of October a man by the name of Marshall, together with his wife and three small children, on returning from a lumber camp at Lobelia, near Richwood, Nicholas County, West Virginia, sickened with what afterward proved to be smallpox at his home in Lawrence township, six miles from Tioga.

The disease was not diagnosed for several weeks and not until the grandfather of the children sickened with the disease. The diagnosis was made by Dr. Charles R. Smith, of Tioga, and was confirmed later by me. I deputized Dr. Smith to visit all contacts and to place them under parole. With your cooperation and assistance, widespread publicity was given to the existence of smallpox in the community and to the fact that many persons had been innocently exposed. The school authorities throughout the county were notified by the central office to review their vaccination certificates and immediately to require all school children not successfully vaccinated within a period of five years to be vaccinated again and to be careful in requiring all applicants for admission to school to present vaccination certificates.

We were particularly fortunate in securing an active participation of the entire community. Dr. Smith and the other practising physicians in the community cooperated heartily, the school authorities throughout the county did their duty and enforced vaccination exactly as recommended and it is very gratifying to us that although five persons had sickened with the disease before the first diagnosis was made, we were able to limit the infection to a total of nine persons in the entire community, and that within two months from the time the disease was discovered it was entirely stamped out. Dr. Smith deserves considerable credit for this work.

Many inquiries came to your inspector concerning nuisances, insanitary conditions existing in communities causing stream pollution, etc., all of which received prompt attention, personal investigation being made when necessary.

This summary has been compiled from the correspondence and records of the former County Medical Inspector, Dr. S. P. Hakes, and from records in this office accumulating since that date.

Statistical Summary of Work Done During the Year.

Forms 36 received,	210	Examined cases alleged to be:	
Forms 37 received,	226	Smallpox,	1
		Typhoid fever,	10
		Scarlet fever,	31
		Whooping cough,	10
		Measles,	54
		Dairy farms inspected,	17
		Schools closed,	3

 UNION COUNTY.

Dr. Charles H. Dimm, C. M. I. Annual Report for year 1914.

March 16th.—following a request from the Department the premises of John Humbach in Buffalo Township were inspected as it was reported that a case of Pulmonary Tuberculosis and a milk separator were kept in the same room. The conditions were corrected and the premises ordered disinfected after removal of patient.

Diphtheria.—Dairy farm of John Swartz was inspected on account of Diphtheria.

November 12th.—At the request of the teacher of the Mazeppa School, we inspected pupils for scabies, one case of impetigo contagiosa was found and reported.

There were received—110 Forms No. 36
76 Forms No. 37

 VENANGO COUNTY.

Dr. J. P. Strayer, C. M. I. I am pleased to forward to you a summary of the work done by your County Medical Inspector and Health Officers for the year 1914 in Venango County.

The year opened with the cases of scarlet fever in the Franklin Hospital still in quarantine—in fact the entire hospital was in quarantine as no cases of sickness were being admitted. As no new cases developed and as the period of contact had long passed, your County Medical Inspector made arrangements with the Board of the Oil City Hospital for the removal of the four nurses who had the disease to the contagious building of that hospital to complete their quarantine period. This was successfully accomplished and permitted the use

again of the Franklin Hospital much sooner than was otherwise possible. One of the patients was held in quarantine forty-six days before desquamation was fully completed.

There were not as many persons ill with communicable disease during the year as in former years. This year there were ten schools closed on account of them: four for scarlet fever, three for mumps, one each for measles, diphtheria and chicken pox. All the school rooms were fumigated before reopening the schools.

Your County Medical Inspector made twenty-three special visits during the year for the purpose of confirming or making diagnosis of communicable diseases. He traveled 349 miles by livery. Besides this certain physicians living in distant parts of the county were deputized to make special diagnoses when needed.

Measles:—As it usually is in this county measles heads the list in number of communicable diseases this year. There were a hundred and eleven cases. The disease did not run as severe a course as in previous years. The disease prevailed more generally during the first part of the year. During the first months I made several special diagnoses.

Chicken pox:—I was very careful to make or have a diagnosis made in every case of chicken pox that I heard about. It is so often overlooked and not infrequently it is smallpox instead of chicken pox when the correct diagnosis is made. There were eighty-nine cases during the year. They were all mild, very few needing the care of a physician.

Whooping cough:—This disease was very prevalent during the first part of the year especially in the more remote townships of the county. It was rather severe.

Typhoid Fever:—There were thirty-two cases of typhoid fever during the year with three deaths. Two Health Officer districts—Nos. 774 and 643—did not have any cases. Districts Nos. 776 and 777 had the greatest number of cases. These two districts are the townships surrounding Oil City and Franklin respectively. District No. 777 had twelve cases. We have more cases of typhoid in this district each year than in any other in the county.

The thickly populated sections of Sugar Creek and Sandy Creek Townships lying contiguous to Franklin produce the largest number. There are no sewers and the water used for all purposes comes from wells, and there is not the care taken to avoid surface drainage there should be with the result that we have a good bit of typhoid in this section.

Your County Medical Inspector made two special inspections in August and one in September where typhoid fever existed; the first case was in Oakland Township, the second in Pinegrove Township, and the third case in Jackson Township. The last case was on a

dairy farm where butter was produced in large quantities for market. The sale of butter was stopped. This case terminated fatally. The owner and proprietor of the farm was the patient. Some two or three weeks before his illness began he spent some time at Conneaut Lake in Crawford County. It was considered that he contracted his illness while on that trip. No other case existed in the entire community and no other occurred after his illness.

Scarlet Fever:—Scarlet fever existed in every district except one. The district having the greatest number of cases, seven, is the most purely rural district in the county. The cases were unusually light, so light in a few instances that it was hard to have the quarantine kept properly.

Diphtheria:—There were fourteen cases of diphtheria and all were treated with antitoxin with splendid results. The disease was confined to three districts.

Mumps:—There were seven cases of mumps confined to two districts.

Erysipelas:—There were five cases of erysipelas also confined to two districts.

During the month of December after the case was removed from the county and State, your County Medical Inspector was informed that a case of smallpox had developed in Oil City. He was a P. R. R. engineer whose home was in Salamauca, New York, where he had gone. Every precaution was taken to prevent the spread of the disease by fumigations, etc. In the light of later events it is not probable that all the germs were destroyed.

Your officers are handicapped greatly by inattention of the Boards of Health in the organized boroughs of the county. There is not one that lives up to the law. We have found many instances where disease has started in the Boroughs and also in the two cities in the county and this has spread into the surrounding country. When this occurs there is also a strife between the Health Officers and the people. The question is always asked why do you not quarantine the people in the towns as well as us. Because of this condition many persons conceal the fact that communicable diseases exist in their homes.

Statistical Summary of Work Done During the Year.

Forms 36 received,	339	Examined cases:	
Forms 37 received,	245	Typhoid fever,	3
		Chicken pox,	34
		Whooping cough,	3
		Measles,	3
		Mumps,	5

Dairy where typhoid fever existed, 1.

WARREN COUNTY.

Dr. C. W. Schmehl, C. M. I. Having a total population of 39,573, according to the decennial census of 1910, Warren County is comprised of twenty-three townships and eight boroughs. The townships population aggregates 25,288 persons inclusive of 857 residents in three incorporated divisions having no Boards of Health, viz., Bear Lake, Columbus, and Grand Valley Boroughs.

In the discharge of my duties as County Medical Inspector I found it necessary to visit fourteen of the twenty-three townships together with the boroughs of Bear Lake and Columbus, and Celoron, N. Y. I thus traveled 967 miles by railroad or trolley and 355 miles by livery besides twenty miles afoot.

There were received from the eight Health Officers in the county 269 reports of placarding and 224 notices of fumigation. Twelve of the reportable diseases claimed our attention during 1914, which I have summarized under their respective headings as follows:

Chicken pox:—This disease was reported from eight townships to the number of seventy-five cases during ten months of the year. Pleasant Township furnished thirteen cases in January and February, confined for the most part to the pupils of the Brick School where a localized outbreak occurred, which called for investigation on January 23, February 16, 21, and 26. Similar inspections were made in Glade Township on February 19, and in Conewango Township on February 9.

Chicken pox was epidemic during nine months of the year in Sheffield Township, aggregating forty-five cases. The disease assumed epidemic proportions in December to the number of twenty-nine cases confined almost exclusively to the pupils in the lower grade rooms of the Brick School in Sheffield Village. Few of these were under medical supervision and, occurring at a time when smallpox was also present, I found it necessary to investigate and review cases of this disease on the following dates: April 13, June 16, and 18, December 1, 3, 5, 7, 16, and 30.

An epidemic among the pupils of the Ralston Hill School, Lime Stone Township, furnished some twenty cases in the last quarter of the year, but owing to failure of parents to report them only four cases were quarantined inasmuch as the majority had recovered at the time of my visit December 15, at which time I also reviewed cases in Deer Field Township and Tidioute Borough.

Diphtheria:—Five sporadic cases of this disease were reported from four townships and Bear Lake Borough, and a month apart.

Erysipelas:—Three cases in three townships in as many months of the year comprise all the reported cases of this disease. On request of the attending physician one case was reviewed in Columbus Borough on February 18.

Malaria:—One case of malaria was reported from Columbus Township in November. There was no laboratory confirmation of the diagnosis.

Measles:—One hundred and one cases of measles during eight months of the year were reported from six townships, divisible into two main groups as to location. The epidemic in progress at the close of 1913 in the contiguous townships of Columbus, Freehold, Spring Creek, and Sugar Grove furnished sixty-seven additional cases in the first four months of 1914 in that section.

During March, April, and May an epidemic was in progress in Sheffield Township to the number of twenty-five reported cases. I confirmed householder's diagnosis on April 1 and 13, in Sheffield Township. July and August saw the end of the epidemic in Warren County with six added cases in Spring Creek Township.

Mumps:—Thirty-four cases of this disease in four townships were reported during five months of the year. An epidemic among the pupils of the Wiltsie School, Pine Grove Township, called for investigation on February 11, at which time I discovered eighteen unquarantined cases among pupils of that school. Pine Grove had twenty-four cases in February and March, and six in June; Sugar Grove Township had one each in February and July; the remainder are credited to Pittsfield Township in April.

Scarlet Fever:—A total of five cases (with one death) in three townships in January, July, and November comprise all the reported cases of this disease. Pleasant Township had three cases in July of which two were secondary in the same family or closely associated relatives. On October 30, I was requested by the attending physician to review a case in Elk Township and on November 24, and December 5, I examined the same patient for release from quarantine.

Smallpox:—January saw the introduction of this disease into Conewango Township to the number of two cases in the same household. It probably had its inception in the person of a small boy who is believed to have imported the disease from New York State. He was not seen by a physician and the parents assuming it to be chicken pox did not report it. I visited this family on January 5 and 29, for diagnostic purposes, and on February 21, and February 26, to release from quarantine. Six cases in two families in Warren Borough are traceable to this source.

On February 12, I examined a child without medical attendance, in Sheffield Township, who was stricken on the way from Tulsa, Oklahoma, where smallpox was prevalent. As a result from this little patient eleven persons were secondarily infected with smallpox,

not, however, spreading beyond the family which she was visiting and a closely associated family in the same township. Trips to this township for location and inspection of contacts were made on February 23, 25, and 28, and on March 21, 23, and 29 I visited same families for release from quarantine.

On April 18, I was summoned to Bear Lake Borough to identify an obscure exanthem which proved to be smallpox. This borough was placed under State supervision and Dr. H. J. Phillips was left in charge as Deputy. The source of infection could not be determined and there was no spread from this case. Inspection to release from quarantine was made on May 8. A rumored diagnostic error in a family then under quarantine for chicken pox took me to Barnes, Sheffield Township, on December 1, where I found smallpox in a mother and a fourteen year old daughter, which later gave rise to two secondary cases in the same household. Their next neighbor, also a mother and a small child, has been quarantined in October for chicken pox and there is evidence that they too had small pox although quarantine had been lifted almost four weeks before. There was a clear history of exposure to smallpox in September at Cheyney's Point, New York, in the latter family. There was no further spread in this immediate locality. Inspections of contacts were made on the following dates: December 3, 5, 9, 11, 13, and 16. Careful review of all rumored or reported cases of chicken pox in this township disclosed two cases of smallpox which had been erroneously diagnosed chicken pox on December 30, in Sheffield Village. At the close of the year the villages of Sheffield and Barnes, Sheffield Township, had one family under quarantine in each.

Tuberculosis.:—In all its forms twenty-three cases of this disease were reported during the year. Particular attention was paid to house disinfection.

Typhoid Fever.:—Eight cases of this disease were reported from six townships, all but one occurring during the latter half of the year. A visit was made to Sugar Grove Township on September 23, to inspect a dairy farm where a patient was under treatment. The same service was rendered in Farmington Township on December 6, but a negative Widal and subsequent operation and bacterioscopic test proved this to be a tubercular lumbar abscess. Similarly another patient on operation was found to be suffering from appendicitis, death ensuing.

Whooping Cough.:—Brokenstraw and the adjacent Township of Pittsfield in February, March, April and May furnished fourteen of a total of twenty-four cases of this disease. Elk Township gave five cases in June, the remainder being distributed between Pine Grove, Sheffield, and South West Townships.

Pneumonia.—One each in Freehold and Spring Creek Townships, in January and March include all the reported cases of this disease.

Miscellaneous Inspections.—On February 9 and March 6, I was called into Pleasant and Watson Townships respectively, to identify an eruptive disease in two adults. A diagnosis of erythema multiforme was made in each case.

Columbus Township claimed my attention on August 11, at which time a tentative diagnosis of impetigo contagiosa was made, in a boy. The attending physician was asked to review the case later and its benignity was affirmed.

The appeal of the Warren Board of Health for aid in determining the origin of the milk-borne epidemic of typhoid fever in progress in August in that borough called for inspection of nine dairies located in Conewango, Glade, Farmington, and Pine Grove Townships, on August 26th and on September 12 and 16, I visited Conewango and Pine Grove Townships and Celoron, New York, to secure samples of excreta of typhoid carrier suspects.

WASHINGTON COUNTY.

Dr. C. B. Wood, C. M. I. Abstracts from reports of investigation of alleged cases of communicable diseases and of other work during 1914.

January 2d. I received a communication from a school teacher in Carroll Township that children from three families who attended her school were infected with whooping cough and no doctor in attendance. I visited the families, confirmed the report and notified the health officer, who instituted quarantine and enforced the regulations.

February 11th. I was called to California by Doctor Martin to investigate an outbreak of scarlet fever in the family of the principal of the Southwestern Normal School located at that point. One child of the principal and one boarding student were the patients, the latter being the first affected. A trained nurse who was in attendance was taken down with the disease and died. The building used as a residence for Principal Hertzog was connected with the main school building by a hall. Considering the large number of students in attendance, the situation was quite alarming. The attending physician, Doctor Martin, was doing all possible to prevent the spread of the disease. Some of the students who were day students remained at

home and were not allowed to continue in attendance. I had the entire student body assembled, including teachers, and talked with them about the necessity of the quarantine and strict observance of all requirements. A strict quarantine was established, day scholars excluded, and the school was allowed to continue in session. The other two patients recovered and no further cases developed. Scarlet fever prevailed in the town of California at the time.

February 18th. I was called to Nottingham Township by Dr. Shuster, of Finleyville, to examine a suspicious case, supposed to be scarlet fever. Not confirmed. I found it to be a case of erythema.

March 13th. Was notified by the school authorities of Carroll Township that whooping cough existed in two families at Riverview, No physician was in attendance. I visited the two families in question, confirmed the report, and notified the health officer, who established quarantine.

March 17th. Was notified by health officer, J. D. France, that several physicians in that section were not reporting mumps. I visited these physicians and investigated the reasons for their non-compliance with the law. I also visited the schools and notified the principal to exclude all children infected, or those coming from infected households.

March 25th. Was notified by health officer, J. D. France, that the wife of the postmaster of Avella, Jefferson Township, was sick with scarlet fever. I visited Avella, instructed the postmaster, S. D. Major, who also kept a general store in which the postoffice is located, that he must secure a boarding house, for himself and his son, and under no circumstances enter his dwelling. Further, that he must disinfect all outgoing mail from Avella.

March 25th. Was notified by health officer, Doctor Runion, that mumps prevailed at Meadowland, and that a number of children coming from infected households were attending school. I visited Meadowlands, called at the school and inquired of the principal why he was not observing the health laws. His excuse was that he was a substitute for the regular principal and was not aware of the requirements. I instructed him as to the requirements and informed him that unless the regulations were observed, the school would be closed. This he did not wish and after that no further trouble ensued.

March 27th. Was called to the Borough of Donora in consultation with the Board of Health in regard to an endemic of anterior poliomyelitis. The type seemed to be very malignant and as one of the physicians expressed it, death ensued before he had time to turn around. This endemic continued for several weeks before it was abated and the mortality rate was very high, there being eleven deaths out of sixteen cases. Serum treatment was inaugurated and happily the disease abated.

April 1st. Upon receiving information from health officer France in effect that postmaster S. D. Major, whose wife had scarlet fever, was not fulfilling his promise in observing the quarantine regulations, I again visited Avela. Under pain of reporting him to the postoffice department, and of closing his store, and in consideration of his repeated promise strictly to observe all that I required; we allowed him to continue. After this visit he observed the regulations and no other cases developed.

April 25th. Was instructed to visit West Zollarsville, West Bethlehem Township, to investigate a number of nuisances complained of by citizens of that village. I found a sad state of affairs, filthy streets, manure heaps, overflowing closets, and several buildings set up on posts (two of which were restaurants) without cellars, and under them a vast accumulation of sewage, garbage, and general filth. I visited the owners of all these properties, giving in my report to you the names of the owners, addresses and locations of properties and character of nuisances. Each of the owners promised a prompt clean-up.

May 14th. I was again instructed to visit Zollarsville owing to another communication received by the Department in effect that the nuisances reported had not been abated. I again visited the property owners and urged again a prompt abatement of the nuisances and reported the same to you.

June 30th. Was called to Nottingham Township by Dr. Shuster of Finleyville to investigate a case of supposed scarlet fever in a young woman who had been visiting in Pittsburgh a family where scarlet fever existed. The diagnosis was not confirmed. The young woman was suffering from erythema due to improper diet. She recovered rapidly and no other cases developed.

July 1st. Was called to Donora Borough in consultation with the Board of Health in regard to an epidemic of scarlet fever which prevailed to an alarming extent in that Borough. This epidemic had developed several weeks previously and continued until well in October. I found the local Board of Health wide awake, several physicians being members of the Board, and a very active health officer. I found that all were fully cognizant of the situation and doing everything in their power to check the disease. The type seemed to be very malignant. Strict quarantine was established, going so far as to establish absolute quarantine over infected houses. The families infected were nearly all foreign, and the extension of the epidemic I found to be chiefly due to the fact that in a number of houses an attempt was made to conceal the disease, and that there was a marked indifference to calling a physician, consequently, in a number of instances the physician would be called only to find the child dying. With the health officer and attending physician, I visited

quite a number of such cases, and the above facts were brought out. During this epidemic, as you will recall, the Associate Chief Medical Inspector was sent by the Department to make an exhaustive investigation, and as you have his full report,* I will close this account with the statement that there were in all two hundred and sixteen cases with forty deaths.

July 7th. I again visited Zollarsville, West Bethlehem Township, in order to ascertain what had been done towards cleaning up that village. I found that some of the nuisances had been abated, manure heaps removed, but the main offenses, great dumps of filth under the buildings as mentioned above, had not been corrected. I reported again to the Department.

Sep. 20th. I was called to Finleyville by Health Officer Chamberlain to investigate a case of reported scarlet fever in the case of a woman and her children, of school age. I found the patient without the characteristic symptoms other than what appeared to be the characteristic rash, and upon further investigation I found she had been eating fresh fish which she thought were tainted. Diagnosis, erythema. Woman made rapid recovery, with no further development in family.

Oct. 10th. I was informed by Doctor Shuster of Finleyville, that a family at Hackett, Nottingham Township, was infected with mumps and were not observing quarantine, and also received several reports concerning children who were attending school coming from infected households. I visited the families, instructed the parents as to the regulations and established quarantine. I also visited the schools and instructed the teachers as to excluding children coming from infected households.

Nov. 28th. On information received from a school teacher in Carroll Township, I investigated a number of families said to have mumps with no doctor in attendance and some of the children attending school. I investigated all these reports, and where I found the disease to prevail, I reported the families to the health officer who established quarantine.

Dec. 2d. Receiving a letter which had been addressed to you, stating that a boy named Marion Collett was afflicted with tuberculosis and was in attendance at public school in Jefferson Township, I visited the school and gave the boy a very careful examination and found no pulmonary lesion. The boy had had six months previously a severe attack of typhoid fever, which left him with a profound Tachycardia. Talked with the boy and his teacher, explaining that the boy should not engage in active exercise, and gave further instruction as to his manner of living.

*This story of the epidemic at Donora may be found among the Special Reports of the Division of Medical Inspection.

December 8th. On information received from a teacher in the schools at Carroll Township in effect that some of her school children were coming from house where mumps and chicken pox prevailed, with no doctor in attendance. I visited the families in question and reported the cases found to the health officer, who established quarantine and enforced the regulation.

Statistical Forms:

Forms 37 received, 876 Forms 36 received, 1,257

WAYNE COUNTY.

Dr. Louis B. Nielsen, C. M. I. The following is a summary of the work of the County Medical Inspector for Wayne County, for the year 1914:

There were received from health officers 257 reports of placarding for contagious diseases, and 252 reports of disinfection, all of which were properly recorded as they came in.

The County having very limited railway service, and travel on the roads at some seasons being difficult, the County Medical Inspector found it advisable, rather frequently, to depute a local physician to act under his direction. In confirming householders' diagnoses, inspecting dairy farms quarantined for milk-spread infections, and investigating epidemics, he personally traveled 258½ miles—his deputies traveling 351 miles; a total of 609½ miles. A written report was forwarded every day that such work was necessary.

Reports of infectious diseases were received as follows:

Typhoid Fever.—Fifteen cases. Of these, two occurred in Lake Township (one in June and one in August); one in South Canaan Township in November; two in Mount Pleasant Township (one in August and one in November); two in Preston Township (one in March and one in May); three in Buckingham Township (one in October and two in November); one in Manchester Township in October; one in Lebanon Township in August; and three in Texas Township (one in September and two in October). The Texas Township cases were in one family; all others, one case in a family.

Diphtheria.—Twenty-one cases reported, distributed as follows: one in South Canaan Township in January; one in Salem Township in March; two in one family in Sterling Township in October; two in the same family in Lake Township in December; three in different families in Mount Pleasant Township in January, February, and September; one in Clinton Township in July; one in Scott Township

in January; one in Preston Township in October; one in Buckingham Township in January; one in Manchester Township in August; one in Dyberry Township in November; one in Damascus Township in October; two in different families in Texas Township (one in March and one in November); one in Cherry Ridge Township in April; two in different families in Palmyra Township (one in January and one in June).

Scarlet Fever:—Eleven cases. Of these; one was reported from Dreher Township in January; two in same family in South Canaan Township in January; and one from another family in South Canaan Township in February; two from different families in Sterling Township in March; one from Canaan Township in December; two from same family in Damascus Township in October; one from Cherry Ridge Township in June; and one from Palmyra Township in October.

Measles:—One hundred and nineteen cases reported. Probably there were quite a few others of which the Health Officers had no knowledge. All cases were reported between March and October and from all parts of the County.

Chicken pox:—Fifteen cases were reported. Probably there were others unreported. Reports received of four cases in different families in Preston Township in April, and one in Preston Township in December; three in one family in Damascus Township in January, and six in two families in Damascus Township in November; one in Texas Township in October. One of the Damascus cases was first reported as smallpox and investigated by the County Medical Inspector.

Whooping Cough:—Ninety-six cases were reported from half of the townships, the disease being present throughout the year. Undoubtedly there were other cases unreported.

Mumps:—Fifty-three cases were reported during the first three months of the year, two-thirds of the cases occurring in the central part of the county.

Smallpox:—No cases.

German Measles:—Sixteen cases were reported from the central and northern townships during the first third of the year; there were probably other cases unreported.

Erysipelas:—Five cases were reported, not related as regards time or district.

Lobar Pneumonia:—Two premises were disinfected.

Tuberculosis:—Eighteen premises were disinfected.

In September, the County Medical Inspector, acting under instructions from the Commissioner, consulted with the local Board of Health and reported upon an epidemic of diphtheria in the Borough of Starrucca.

In December, forty school children of poor parentage were vaccinated by the County Medical Inspector.

Besides instruction given individual health officers as occasion required, on April 23rd a meeting attended by all of the health officers was held at Honesdale, when the Chief Medical Inspector gave a very interesting and instructive talk on the work of the Department.

WESTMORELAND COUNTY.

Dr. I. M. Portser, C. M. I.

Smallpox:—On April 17th, diagnosed smallpox at G. A. K.'s at Hanastown, Hempfield Township. The original case, Mr. G. A. K., had the fully developed disease for six days previous to the establishment of diagnosis and quarantine. In the household were three adults and two children. All subsequently contracted the malady. The contacts were necessarily many. Five households were held absolutely for ten days. One family, T. T., was held eighteen days under patrol of State Police. This family refused vaccination and was also were neglectful as regards quarantine. The above were the only cases in the county during the year. Smallpox was reported at Smithton in South Huntingdon Township on March 2d, also at Madison, Hempfield Township, on May 26th, in Parnassus Borough December 31st. Both proved to be chicken pox. The disease was reported in Latrobe Borough February 18th and latterly was diagnosed to be syphilis.

Scarlet Fever:—On March 26th I investigated an epidemic in the Seraphic Home in Derry Township, where twenty-seven cases developed. The Home received the product of the Juvenile Court of Pittsburgh and as the disease at that time was prevalent in this city no doubt was brought into the establishment in this way. The malady was of a mild character, very little angina and practically no secondary lesions. Cases were isolated, no new pupils admitted and none allowed to leave the premises and the epidemic soon abated. The mild character of the disease ruled throughout the county and probably accounted for the frequency of the disease in the various townships. Cases were most noticeable in the vicinity of Irwin, North Huntingdon Township. In all 262 households were under quarantine, forty-six in the Penn, North Huntingdon Township, District.

Scarlet fever was the most prevalent contagious disease in the county from January to December, starting the year with a small epidemic in the Mt. Pleasant School District in Rostraver Township where it was necessary to quarantine five families that had not been reported along with four regularly reported households. It was necessary to close and fumigate the Mt. Pleasant School.

Typhoid Fever:—Ninety-six households were placarded for typhoid fever, fifteen cases were reported by one physician in the vicinity of Bradenville, Berry Township, during September and October. The remainder of the cases were evenly distributed over the various townships during the year.

Diphtheria:—Two hundred and six households were under quarantine for this disease. The only unquarantined cases were found January 8th at Pine Run, Allegheny Township. July 29th a case of tetanus was reported following the use of State antitoxin for F. B. in Trafford Borough. This case subsequently proved to be one of tetany and later was treated for chorea in a Pittsburgh institution.

Mumps:—Two small epidemics of mumps occurred, one March 7th with seventeen cases near North Washington, Washington Township, the other January 17th with twenty-one cases at North Scottdale. All the cases were diagnosed by the Inspector or deputy. In all one hundred and fifty-one households were under quarantine during the year for this disease. One hundred and six households were under quarantine for measles; 114 for chicken pox; 79 for whooping cough; 9 for meningitis; 17 for erysipelas; 2 for poliomyelitis. Tuberculosis was reported in twenty-one instances. Pneumonia in eight and trachoma in two cases.

One feature of the work was the cooperation of School Boards in the various Townships, who invariably closed and fumigated schools when a contagious disease developed in a school, without waiting for a notification to do this. As it was, no serious epidemic occurred in any school district during the year. In the schools that were ordered closed it was usually a question of fact with the School Board as to whether the child was ill while in the school room.

Boroughs:—October 19th, I investigated an epidemic of scarlet fever in Trafford. The health authorities were instructed in the method of "trapping" cases not under quarantine; otherwise I found a smooth working board

October 29th, I investigated an epidemic of scarlet fever at New Florence. Internal dissention of the board seemed to be the only difficulty.

July 30th, I investigated typhoid conditions in Scottdale. This affair was taken care of by the home office.

Statistical Summary of Work Done During the Year.

Forms 36 received,	1,423	Schools closed 13.	
Forms 37 received,	1,122	Scarlet fever,	6
Health Officers instructed.		Diphtheria,	3
At the office,	29	Mumps,	3
In the field,	10	Smallpox,	1

Cases examined, alleged to be:—

Smallpox,	11	Dairy farms inspected,	21
Diphtheria,	4	Typhoid fever,	7
Scarlet fever,	14	Diphtheria,	4
Chicken pox,	23	Scarlet fever,	10
Measles,	19		

WYOMING COUNTY.

Dr. H. L. McKown, C. M. I. Whenever work was accomplished throughout the year, a detailed report of the same was mailed to the Department on that particular date by your County Medical Inspector. A summary of the work performed is all I deem necessary at this time.

Wyoming County is one of the small counties of the State, having an area of 397 square miles, with a population of 15,509. There are eighteen townships and five boroughs in the County. Of the eighteen townships under my supervision, five were visited by me during the year, in an official capacity; Overfield Township, twice; Mehoopany, Eaton, Monroe, and Tunkhannock Townships, once.

During the year there were 324 reports of placarding (form 36), and 243 reports of disinfection (form 37). These reports were examined, recorded, and forwarded to the Department. Of the diseases reported, this office had to do with the following:

Tuberculosis (disinfection only), chicken pox, measles, scarlet fever, typhoid fever, diphtheria, mumps, erysipelas, and whooping cough.

During the month of January, sixty-three communicable diseases were reported, while December had the smallest number, with only three.

Nuisance:—During the latter part of July, Mr. W., of Scranton, through his attorney, Mr. W. H. C., wrote to the Department in regard to an alleged nuisance or insanitary condition on the premises of Dr. B., at Lake Winola, Overfield Township. The Department ordered me to visit these premises at Lake Winola, and on July 28th I made an inspection of the out-house and the grounds of Dr. B. and found that they were more or less in an insanitary condition, and, after interviewing Dr. B., he agreed to have the same attended to at once. It was arranged to move the closet to the back of the lot, to put in metal containers, using lime, and emptying same when necessary. This seemed satisfactory to Mr. W., and later on I learned that the conditions were very much improved.

Measles:—On February 5th, I visited the family of Mr. K., near Noxen, Monroe Township. The doctor in attendance had reported this as a possible case of smallpox and asked for a diagnosis. I found that Eugene K., aged twenty-one, had no definite history of exposure, but was suffering from a very bad case of measles, and that the other children in the family were either ill or coming down with this disease. The conditions appeared on the surface as rather suspicions, but when I saw the case it was purely a case of measles.

Measles were quite prevalent throughout the county, there being more or less of an epidemic in Monroe, Noxen, and Forkstown Townships. At different times throughout the year measles were also reported from Mehoopany, Washington, and Nicholson Townships. Having very efficient Health Officers in Forkston, Monroe, and Noxen Townships, I did not deem it necessary to visit any of these townships at any time, but some of the schools were closed and fumigated and the outbreak of this disease in the different localities was taken care of as well as possibly could be done under existing conditions. There were an especially large number, two hundred and twenty cases being reported during the year.

Diphtheria:—There were twenty-seven cases of diphtheria reported throughout the county from ten townships. After reviewing the reports of the Health Officers and, in a number of cases, getting in communication with them personally on the telephone, I did not visit any of these cases throughout the year, being satisfied that the cases were properly quarantined and that proper quarantine regulations were being observed.

Typhoid Fever:—Ten cases of typhoid fever were reported in the course of the year from five different townships. At the request of the Department, I inspected the following cases:

On August 13th, I inspected the premises of Mark Adams, Mehoopany Township, and found a trained nurse in charge of case. Milk sold under restrictions and everything else carried out according to the instructions laid down by the Department. This case was infected, undoubtedly, from somewhere far distant from home, as there were no other cases in the vicinity and the sanitary conditions on the premises were almost perfect.

On August 22, I inspected the premises of J. S., Eaton Township, and ordered the sale of milk stopped as this man could not comply with the instructions issued by the Department. Found that the sanitary conditions on the premises were not of the best and that there had been a case of typhoid fever in November, 1913, on premises near by. I went over instructions left by the Health Officer and, after being thoroughly satisfied that they were understood and getting into communication with his physician, I felt sure that the sanitary conditions would be attended to. Later I found that no one else contracted the disease from this case.

On October 8, I inspected the premises of T. W., in Overfield Township; and found two cases of typhoid fever. I suggested in my report to the Department that analysis of the water on the premises be made, as I suspected both spring and well. Water analysis was made later and that of well found infected. Walter Weaver, aged twelve, later contracted the disease. Afterward, the well was thoroughly disinfected and premises thoroughly cleaned and this apparent outbreak was cut short on this particular premises. The sale of milk was stopped and all other requirements laid down by the Department of Health complied with.

On November 4, I inspected the premises of C. F. S., Tunkhannock Township, where two cases of typhoid fever existed, Mrs. C. F. S. and A. S. Water supply was from a spring that was loosely walled in and could easily become infected. This was inspected and later the spring was thoroughly cleaned and disinfected. There was a case of typhoid fever on the premises about three years ago. For these particular cases I was unable to get the history of any outside source. No one else in the vicinity contracted this disease.

Scarlet Fever:—Thirteen cases of this disease were reported during the year from four townships, there being at no time any semblance of an epidemic. I did not consider it necessary to investigate any of these cases, as the Health Officers informed me that proper precautions were being observed.

Mumps:—Eighteen cases were reported from six townships, the largest number from Mehoopany Township, with ten cases. There at no time seemed to be an epidemic, as the efficiency of the Health Officer in this particular locality prevented such an occurrence.

Chicken pox:—Ten cases of chicken pox were reported from Tunkhannock and Falls Townships; occurring mostly during the months of September and October.

Erysipelas:—Four cases of erysipelas were reported during the year; two in Forkston, one in Windham, and one in Nicholson Townships.

Tuberculosis:—There were nineteen cases of this disease that came under my observation for fumigation, after death of patient or removal of family.

Whooping Cough:—Sixteen cases of whooping cough were reported during the year from four different townships. These occurred mostly during the months of March and April.

With the exception of the numerous cases of measles, very few communicable diseases were reported during the year. This is undoubtedly due to the prompt action of attending physicians and the Health Officers in the discharge of their duties.

YORK COUNTY.

Dr. J. S. Miller, C. M. I., Abstracts from reports of investigations of alleged cases of communicable diseases, during year 1914, with a statistical summary of work done during the year.

York County was organized August 19th, 1749, having been formed from a part of Lancaster County, has an area of 903 square miles, and is divided into thirty-five townships, in which are located thirty-four boroughs and one city—Hanover being the largest borough, with a population of 7,057, and Cross Roads Borough the smallest, with a population of 158; York City has a population of 44,750. (Census of 1910).

In submitting my annual report on communicable diseases and work performed as County Medical Inspector during 1914, unless otherwise stated, reference is made to the unincorporated parts of York County.

During 1914, 302 cases of communicable diseases were reported in thirty-three townships, as against 1,187 during 1913; Franklin and West Manheim townships reported no communicable diseases within their borders. The greatest number reported from any township was twenty-eight in West Manchester township, sixteen reported in Penn township, being next; ten townships in the county reported over ten cases during the year; twenty-three townships reported less than ten cases of communicable diseases.

The greatest number of any one communicable disease reported was for typhoid fever. Ninety-five cases were reported from twenty-six townships, nine townships reporting no cases of typhoid fever. West Manchester township reported the greatest number, twenty.

Typhoid Fever:—On receipt of Form 36 from Health Officer for Peach-bottom township, reporting typhoid fever in the family of Mr. N. B. S. and that milk was sold from the premises, I visited this dairy farm January 15th, accompanied by the Health Officer of Fawn township. I selected this route because it enabled me to make an inspection in Fawn Grove borough as well as one in Peachbottom township on the same day. I found the S. family to consist of Mr. S., his wife, and one son—Mrs. S. and the son both being ill with typhoid fever, with an onset about December 15, 1913. Dr. W. E. Arthur, Cardiff, Md., attending physician, made his first visit December 29, 1913. Mrs. S. took patent medicines from the date of onset to the first visit of the doctor. Mrs. M. McL., a sister-in-law to Mrs. S., nursed both patients. The discharges have been deposited in a ditch dug for that purpose, lime being used to cover them.

There was a previous history of typhoid fever on these premises, when about ten years ago Mr. F. D. and family lived there and four members of the family suffered from typhoid fever, one of whom died. Mr. S. has lived on this farm two years; he had an attack of typhoid fever about eight years ago. Mrs. S's mother had typhoid fever years ago.

The water supply was from a spring of soft water located at the foot of an incline about a hundred feet from the dwelling house and about two hundred feet from the barn, and walled on two sides. The drainage from house and barn is toward the spring. During heavy rains water flows in torrents in the direction of the spring and dams the water back into the spring.

I could see but one cause for disease on these premises. The general sanitary condition was bad; the location of buildings, a history of typhoid fever, and the flooding of the spring with surface drainage all seemed to indicate that the water supply was contaminated with sewage. I found on these premises, what prevails on many of the farms in this locality, viz.:—previous history of typhoid fever, contaminated water supply, and general insanitary conditions.

Forty to fifty pounds of milk were sold daily to a creamery and the sale of milk continued because, immediately after the diagnosis was established, the dairy was put in sole charge of James D., who lives about one-quarter mile distant.

On receipt of a telephone message from Dr. E. S. Stambaugh, Thomasville, reporting typhoid fever in the family of G. P. L., Jackson township, and that butter was made and sold from the premises, I visited this dairy farm February 8th and found Beulah L., aged twenty-three, ill with typhoid fever. The date of onset was February 1st. Dr. S., attending physician, made his first visit February 4th. The patient was nursed by her mother, who had an attack of typhoid fever many years ago, before living on this farm. The discharges had been disinfected with carbolic acid and deposited in a ditch dug for that purpose. History of typhoid fever on premises is negative.

The water supply was from a spring of soft water located seven hundred yards from the dwelling, walled with stone and protected from surface drainage; water runs by gravity through galvanized iron pipes into house and barn.

The patient became, January 13, 1914, a domestic in the home of her brother who lives in Nashville, Jackson township, who had an attack of typhoid fever October, 1913, and was cared for in the York Hospital.

About two years ago there were thirty cases of typhoid fever in the village. It is my opinion that she contracted the disease from drinking water while in her brother's home.

Thirty pounds of butter were made and sold weekly to about thirty different families living in York. The dairy was put in sole charge of Mrs. E. R., who lives one-quarter mile distant and the sale of butter discontinued.

August 19, Dr. L. H. Fackler, York, reported typhoid fever in person of M. K. B., aged eighteen, West Manchester township, and three days later, finding that he had made an error in diagnosis, reported this to me, and requested that quarantine be lifted. I visited the family with Dr. F. Steptember 1st, examined the patient, and found him to be convalescing. A Widal test was made with negative results, after which quarantine was lifted.

On May 15th, G. P. J., milk dealer, West Manchester township, informed me that there were a number of cases of illness on his milk route and requested me to investigate. I accompanied him to four dairy farms, from which he obtains his supply of milk, but was unable to obtain any history of typhoid fever on any of the farms.

About May 20th, doctors attending cases of illness in West Manchester township, wherein the above dairies are located, began to report them as typhoid fever—a positive Widal having been obtained for a number of patients.

I instructed Mr. J. thoroughly to cleanse all his dairy utensils, which he did. Twelve cases of typhoid fever—six adults and six children—were reported in West Manchester township up to May 30th. There were three cases that were not reported, probably mild cases, two of whom were children. All these cases had been supplied with milk by Mr. J. Up to May 30th, six cases of typhoid fever had been reported in the city of York. They also had been supplied with milk by Mr. J.

On May 31st, I made a personal investigation of every case of typhoid fever reported in West Manchester township and recorded them on Form 60. The date of onset in all cases in the township lay between May 1st and 10th; for those in the city between May 3rd to 14th; the oldest patient was sixty years of age and the youngest three. A positive Widal was found in the case aged sixty.

There are three cases of typhoid fever in the family of D. L., West Manchester township. Oysters were sold from this place and came in cans from Crisfield, Md. They had stopped selling oysters about March 20th.

The infection was due to contamination of milk. Mr. J. had an attack of typhoid fever July, 1906, lasting twelve weeks. He resided on same premises where he now lives and conducts his dairy. A bacteriological examination, made in the State Laboratory, demonstrated that he is not a typhoid carrier.

On receipt of Form 36 from Health Officer in Springettsbury township, reporting typhoid fever in the family of D. H., and that milk

was sold from the premises, I visited this dairy farm October 11th and found William T. H., aged twenty-two, ill with typhoid fever. The date of onset was September 20th. Dr. J. C. May, Manchester borough, attending physician, made his first visit September 27th. The patient was nursed by his mother. The discharges had been treated with a solution of bichloride of mercury and deposited in the privy.

The history of typhoid fever on the premises was negative, but there was a family history of typhoid fever, positive on both sides. Mr. H. and his father had typhoid fever about twenty-two years ago, when Mr. H's father died. Mr. H. is a tenant farmer and has lived on this farm three years.

The water supply was from two wells of hard water. One is a dug and walled well, thirty feet deep, located about twenty feet from the barn, on a slightly lower plane than the barn yard, and covered with a good platform. This water is used for cattle and is frequently cloudy. The other supply is from a drilled and walled well, thirty-five feet deep, located about fifteen feet from the house and about seventy-five feet from the barn yard, on a slightly higher plane than the barn yard; it has a good platform. This water never becomes cloudy and is used for household purposes.

The farm buildings are located within a hundred feet of Codorus Creek, about four miles south of York. The odor from sewage in the creek is very offensive at times to people living in this vicinity and, as usual, this family seemed to think that this case of sickness might have been caused by these foul odors.

There were five cases of typhoid fever in Pleasureville, a small settlement about one and one-half miles distant, and the patient had spent considerable time on premises in this village where typhoid fever soon afterwards developed. I am therefore of the opinion that he contracted the disease while visiting in Pleasureville.

About six gallons of milk were sold daily to the York Sanitary Milk Company. This sale was stopped October 11th.

Diphtheria.—Fifty-nine cases of diphtheria were reported during year. Sixteen were reported in Penn township, this being the largest number reported in any township; the remaining forty-three cases were distributed in fourteen different townships. Twenty townships were free from diphtheria during the entire year. Fourteen cases of diphtheria were reported on thirteen dairy farms. These farms were inspected and the handling and production of dairy products investigated with the following results—a detailed report of each inspection having forwarded to the Department, viz:—On seven of these dairy farms the sale of dairy products was discontinued; on the remaining six, the sale of milk, etc., was continued by having the dairies put in sole charge of individuals living apart from the house whereon quarantine was established.

I found but little trouble in enforcing the rules and regulations of the Department of Health in relation the inspections reported. I have reasons to believe that the families instructed, relative to handling of dairy products during quarantine period, were conscientious in their observance.

I find many of the practising physicians in the county cooperating with the Department of Health in the enforcing the rules to be observed in the care and management of dairy farms whereon diphtheria exists.

Scarlet Fever:—Twenty-three cases of scarlet fever were reported during 1914. The greatest number reported in one township was nine in Chanceford townships; the remaining fourteen cases were distributed in ten townships, twenty-four townships being altogether free from scarlet fever. Eight dairy farms were inspected on account of scarlet fever. The sale of milk or milk products was discontinued on six dairy farms; on the remaining two, the sale of milk, etc., was continued by having the dairy placed under the control and management of persons living part from the family quarantined.

On receipt of a telephone message from the Health Officer in Fawn township, reporting scarlet fever in the family of Mr. J. W. L. and that milk was sold from the premises. I visited this dairy farm January 1st, accompanied by the Health Officer, and found Waverly L., aged nine years, ill with scarlet fever. The date of onset was December 23, 1913. Dr. W. H. Smithson, New Park, attending physician, made his first visit December 29th, having been consulted at his office December 26th. The patient attended New Park school, and was taken ill while in school December 23rd.

Source of contagion:—in all probability this boy contracted scarlet fever while in school. I believe there have been a number of mild cases in this district that have not been reported, inasmuch as the patients were not considered sufficiently ill to need a physician. There was scarlet fever in this school last winter, and I believe that some of the books in the New Park school contain the infection, and owing to this conclusion I have written to Secretary of School Board in Fawn township, instructing him to fumigate the New Park school rooms, and to seriously consider the importance of destroying the books by fire.

About six gallons of milk were sold daily to a creamery in New Park. Mr. L. agreed to put his dairy in sole charge of V. M., who lives about one mile distant.

I have written Dr. W. H. S., who is Inspector of Schools in Fawn township, carefully to examine all children in the schools, on account of scarlet fever, as I have reason to believe that mild cases exist in this neighborhood.

Chicken Pox:—Fifty-four cases of chicken pox reported during 1914. The greatest number of cases reported in one township was fifteen in Codorus township. The remaining thirty-nine cases were distributed in seventeen townships, eighteen townships being free from chicken pox during the year.

On receipt of personal information from the Health Officer in Codorus township, reporting alleged unreported cases of chicken pox in the Sheaffer school and district, Codorus township, I visited this school and district January 19th, accompanied by the Health Officer. The enrollment of the Sheaffer school was found to be forty-two pupils—twenty-one being present.

I found and examined fourteen children who were afflicted with chicken pox and reported them to the Health Officer, who has since placarded the houses.

Probable source:—About November 26, 1913, Mrs. A. F., of Philadelphia, with her daughter Edna, who had an attack of chicken pox about this time, visited the home of Mrs. Wm. H., who lives in the Sheaffer school district. Mrs. F. is a sister of Mrs. H. Edna F. entered the Sheaffer school as a pupil December 8, 1913. About Christmas, chicken pox became prevalent in this school and district. I closed the school and ordered the school room fumigated. I also ordered the Sheaffer Church fumigated because the Sunday School had been attended by many children who suffered from chicken pox, or came from homes wherein chicken pox existed.

On receipt of information from the Health Officer of Penn township, after placarding the house of B. F. L., Penn township, on account of chicken pox, that his children had contracted while attending the New Baltimore school, Penn township, I visited that school March 4th, accompanied by Health Officer, and found an enrollment of forty-nine pupils. The teacher informed me that the first case of chicken pox appeared in her school the latter part of October, 1913, and that from then on there had been an occasional case of chicken pox in this district.

When any child in the district had chicken pox it would remain at home for one or two weeks, and would then return to school. I found no cases in school on the day of my visit but, owing to the history received, I instructed the Secretary of the School Board of Penn township, to fumigate both primary and secondary school rooms in the New Baltimore school building.

Measles:—There were only seven cases of measles reported during 1914, and these were distributed in seven townships.

Whooping Cough:—Thirty-nine cases of whooping cough reported during 1914, distributed in seventeen townships, eighteen townships being free from this disease.

On receipt of information from the Health Officer of Penn township, wherein it was alleged that there was whooping cough in the Center Primary School, I visited this school January 8th, accompanied by the Health Officer, and found the enrollment to be sixty-six (all children under nine years of age), fifty-five pupils being present on the day of my visit. I found about one-third of the pupils present coughing and remained in the school room fully an hour. During this time I failed to find anyone having signs of whooping cough, and so reported to the Department at Harrisburg.

Erysipelas:—Seven cases of erysipelas reported in five townships during 1914; thirty townships being free from this disease.

Pneumonia:—Four cases of pneumonia reported in three townships during 1914; thirty-two townships being free from this disease.

Mumps:—Fourteen cases of mumps were reported during 1914, distributed in six townships, with nine cases in Shrewsbury township; there was no report of mumps from twenty-nine townships.

On receipt of a telephone message from the Health Officer for Shrewsbury township, reporting mumps in the Kratz school of that township, and also unreported cases with no physician in attendance in the same school and school district, I visited this school and district on March 19th, accompanied by the Health Officer. I obtained satisfactory information from the teacher that there had been cases of mumps in her school during the past three weeks. I examined the pupils but was unable to detect any mumps.

I then visited the family of Mr. A. B. and examined his children. I found four sick with tonsillitis; Mrs. B. informed me that they had had mumps about four weeks before. I obtained permission to fumigate the house, which was done March 20th.

On receipt of a telephone message from the Health Officer for Fairview township, stating that he had placarded the house of E. C. for an alleged case of mumps, no physician being employed, I visited these premises December 14th, accompanied by the Health Officer, examined the children, and found that the patient had an adenitis, also hypertrophy of both tonsils, with some acute inflammation of the tonsillar tissue. I ordered the placard removed, which was done at once.

CITY INSPECTIONS.

Smallpox:—On the evening of April 6, Dr. J. H. Gilbert, York, notified me of an alleged case of smallpox residing in the Lafayette Hotel, South George Street, York. I accompanied Dr. G. at once to this Hotel and, on examination, suggested that the case be reported as smallpox, the patient be removed to the Sanitary Hospital, and absolute quarantine be established at Hotel, all of which was promptly done.

I visited the patient at the Sanitary Hospital on the morning of April 7th and obtained the following information, viz.: C. W., aged fifty-one years, born in Scotland, proof-reader by occupation; left York for Lancaster, January 22, and remained there until February 4th when he went to Baltimore, Md., where he boarded at the Sanford Hotel, and was employed in the Calvert Building. He left Baltimore on the morning of March 17th, traveling on foot, and arrived in Cockeyville, Md., the same evening. He remained there all night in a private house in "The Marble Hill District," but could not give name of householder. He left Cockeyville on the morning of March 18th, and arrived in Shrewsbury borough, Pa., the same evening and stopped in a private home. He left there on the morning of March 19th and arrived in York at one o'clock that afternoon, going direct to the Lafayette Hotel, where he has resided ever since. He was employed by the York Printing Company, South Water Street, York.

He began to feel ill April 1st, and consulted Dr. G. at his office April 2nd, 2:00 P. M., his temperature was then 102.° He visited Dr. G. two or three times and, finally, on April 6th, Dr. G. became suspicious that his patient might have smallpox and called me April 6th, as above stated.

I found this patient had been vaccinated in infancy and had two cicatrices on his arm, which indicated that he had been vaccinated twice. He claimed that both had been performed before he was three years of age. This case of smallpox was of the discrete form.

I am of the opinion that he contracted the disease while in Cockeyville, Md., on night of March 17th.

In response to your letter of August 24th, relative to chicken pox in a family by the name of Ha., living in York, and having a history of smallpox, I consulted with Dr. W. H. Treible, City Physician, and with him went over the history of chicken pox in York. After procuring from the Health Officer of York memoranda of all cases of chicken pox reported, with ages, etc., occurring in the city during April, May, June, July, and August, I proceeded to investigate as you directed.

I found that I was obliged to visit nearly all cases of chicken pox in adults occurring in York during the months mentioned.

Summary of Investigation of Smallpox in York, April 26th to August 19th, inclusive.

Number of cases of smallpox reported,	2
Number of cases of smallpox unreported and unattended,	3
Number of cases of smallpox reported chicken pox,	3
	<hr/>
	8
Number of cases of smallpox treated in York Sanitary Hospital,	2
Number of cases of smallpox treated in their homes,	3
Number of these persons never vaccinated,	7
Number of these persons vaccinated once,	1

Source:—Contact in York with an individual who had smallpox, or who had been exposed to smallpox, presumably in Middletown, Dauphin County, in which vicinity smallpox had been reported during early part of 1914.

REPORT OF AN INVESTIGATION OF SMALLPOX ERRONEOUSLY REPORTED AS CHICKEN POX TO THE HEALTH AUTHORITIES BY SEVERAL PHYSICIANS OF YORK.

First case.—April 24th, Jessie M. H., aged thirty-two years, wife of Calvin C. H., was taken ill and on April 26th Dr. J. M. Gross was called. He visited her once and twice daily for first two days, then daily for at least two weeks. She was confined to her bed from April 26th to May 15th. Dr. Gross reported the case as chicken pox, giving as date of onset—April 29th.

Mrs. H. gave me a history of chicken pox in childhood, saying she had marks of it on her face. She had never been vaccinated.

Second case.—On May 13th, her husband, aged thirty-five years, who is employed as a fireman in the York Wall Paper Mill, took to his bed, and was attended by Dr. Gross, who reported the case as chicken pox, giving as date of onset, May 12th. He gave me a history of chicken pox in childhood. His mother also informed me that all her children—nine in number—had had chicken pox in childhood. Mr. H. had never been vaccinated. He belongs to two fraternal organizations and during his illness was visited by committees from both.

The H. family lived in a two-story house, the back building of which is very close to their neighbor, Mrs. A. M., widow, aged forty-five years, dressmaker, who formerly lived in Harrisburg. It became a tenant on the premises March 20th, 1914.

Mrs. H., who was first taken ill and from whom her husband, I have every reason to believe, contracted his illness, informed me that she attended neither church nor Sunday school, and belonged to no fraternal organizations; had not been to visit her mother-in-law, Mrs. Ann M. H., who lives in Manchester borough, for at least three months before her illness, nor had she visited any other place in the County during same period.

Some weeks prior to her illness she visited a step-brother, who had smallpox thirty years ago, and also another brother and a brother-in-law, but there was no illness in any of the above named families at this time, nor was there at the time of her visits.

Mrs. H. visited picture shows, in York, on Saturday nights, always in the company of her husband. He occasionally visited picture shows unaccompanied by his wife. Mrs. H. did the family washing for one family, but there was no illness reported in this family.

Mrs. H. was on intimate terms with her new and near neighbor, Mrs. M., who has since moved and cannot be found. According to in-

formation received from Mrs. H., her neighbor Mrs. M. entertained one Mr. L. W. N. in her home from Saturday night to Sunday night. He resided in Middletown, Dauphin County; was a blacksmith and was employed in the Middletown Car Shops. A number of cases of smallpox had been reported in that vicinity during the early part of 1914.

I have every reason to believe that Mrs. M. had been successfully vaccinated and thus protected from smallpox. That Mrs. H. first contracted the disease shows that she must have been exposed first to the contagion and this exposure probably took place during the absence of her husband, when she was associated with Mrs. M. I am convinced from the analysis of the H. cases that Mr. L. N. either had smallpox, or was associated with some one who had, and his visits to the M. house and Mrs. M's intimacy with Mrs. H. undoubtedly account for the source of smallpox in York.

Third case.—This was not reported, nor was it properly diagnosed. Mrs. Laura H., a practical nurse, her daughter Vera, age fifteen years, her mother, Mrs. R., and an aunt, Mrs. M., live together. Mrs. R. had two atypical cicatrices on her arm; Mrs. Laura H. had one large atypical cicatrix on her arm, and her daughter Vera, who had been vaccinated in childhood before entering school, had an atypical cicatrix. Mrs. M. had smallpox many years ago.

On April 27th, Mrs. Laura H. was called to the H. home to take care of Mrs. Bessie H.; Vera H. (third case) took dinner at the H. home Sunday, May 3rd, and later on (date could not be given) was taken ill while at work in a studio, where she was employed. Dr. J. H. King saw her once and diagnosed the case as grippe. Later on the family concluded that it was chicken pox, or the same disease as that of Mrs. H.

Fourth case. Mrs. Catherine H., a sister of Calvin C. H., mother of two small children, both of whom and their father have been successfully vaccinated. She visited the H. home three times during the illness of Mrs. Bessie H., first visit May 3rd, and was taken ill about May 18th. Dr. R. E. Butz attended her and diagnosed her illness as grippe on his first visit. On his second visit he diagnosed it as chicken pox and reported the case as chicken pox, giving as the date of onset May 23rd, which date was carelessly given. No other case in family. The house was fumigated June 20th.

Fifth case. Mrs. Maud Y., forty years of age, married, mother of one daughter, aged seven years, who had been vaccinated before entering school; Mrs. Y. had never been vaccinated. Mrs. Y. visited the fourth case two or three times during her illness. Just when Mrs. Y. was taken ill is a question, as she employed no physician; she remained in the house during early part of her illness. The date of onset was probably about June 10th. This was the only case in the family.

Sixth case. Franklin McG., aged five years, son of Clinton McG., never vaccinated, was taken ill with convulsions July 4th and, a few days later, the family concluded by the appearance of an eruption on his face and body that he had chicken pox. No physician was in attendance. He contracted the disease while playing in the home of the fifth case. An important and significant fact in this case is that this child was vaccinated twice with negative results, by Dr. W. H. Treible, August 5th, after his mother's illness had been diagnosed smallpox.

Seventh case. Isabella McG., aged thirty-five years, wife of Clinton McG., was taken ill early in August. Dr. W. S. Weakley visited her and becoming suspicious of her appearance, called Dr. Treible, who diagnosed the disease as smallpox. She was removed to the York Sanitary Hospital in the evening of August 5th, taking with her Annie E. McG., aged ten months. Dr. Treible gave as date of onset July 31st. The house was fumigated after the removal of Mrs. McG. and her infant.

Eighth case. Since the removal of Mrs. McG. and her infant to the Sanitary Hospital, Dr. H. H. Farkas, attending physician, reported Annie E. McG. ill with smallpox; date of onset August 19th.

There were a great many individuals exposed to the contagium of smallpox in home of Calvin C. H. They gave a dinner party Sunday, May 3rd, at which time five or six persons, outside of the family, were exposed. Mr. H's mother, who lives in Manchester Borough, spent the night there; probably spending twenty-four hours in the house. I visited her in her home, when she informed me that she had been vaccinated and re-vaccinated, hence she was protected against smallpox. Visiting committees from the several organizations of which Mr. H. was a member, and other acquaintances of the family, whose names and addresses I did not procure, were also exposed.

Another interesting fact which was obtained is, that Mrs. B., whose property joins Calvin H's in the rear, is the owner of the H. house, and would not receive money directly from the H. home during their illness. She became so suspicious of their appearance that she called in her family physician and had her family vaccinated.

During the sickness of Mrs. Catherine H., some one asked a member of her family, what they thought ailed Mrs. Catherine H. The reply was they believed it was varioloid but the Doctor said it was chicken pox.

On receipt of instructions from the Chief Medical Inspector of the Department, November 24th, directing me to visit Dover Borough and report on typhoid fever which existed there, I visited that Borough November 30th and beg to report as follows:

Dover Borough is located about ten miles northwest of York, near the centre of Dover Township. The village has one main highway along which houses are built on both sides for about half a mile. It has a population of 576, and owns its water supply. The Borough has also a great many wells from which drinking water is obtained, especially during the summer months when the municipal supply of water is warm.

The rock formation on the surface is sand-stone, and at a certain depth limestone is found in abundance. All water is hard.

During past forty years Dover has had occasional cases of typhoid fever, but at no time an epidemic.

I herewith submit the findings of my investigation, viz.:

First case. Mabel Gross, aged three years, grand-daughter of Emanuel Gross, living on his premises, was taken ill about July 30th, and on August 4th, Dr. N. C. Wallace, Dover, visited her and prescribed for her. He diagnosed the case as enterocolitis. She was sick in bed four weeks, and made a good recovery.

Second case. During the illness of Mabel Gross, her cousin, Vera Spangler, aged three years, living with her parents, Jonas and Hattie Spangler, in a house two doors west of Emanuel Gross, was sick for about two weeks; most of the time was spent lying on a lounge in the kitchen. Dr. Wallace prescribed for her also but no diagnosis was given. She recovered.

Third Case. Mary Spangler, aged sixteen months, daughter of Jonas and Hattie Spangler, was taken ill about September 25th. On September 26th, Dr. Wallace was called and attended her until November 7th, when he visited her last. She made a good recovery. The diagnosis was enterocolitis. The mother nursed this child at her breast during her entire illness.

Fourth case. Jonas Spangler, aged thirty one years, took to his bed on the evening of October 31st, having a temperature at that time of 103°. He probably was first taken ill about October 25th. Dr. Wallace attended this patient and diagnosed the case as typhoid fever. He died November 16th.

Fifth case. Hattie Spangler, aged twenty-seven years, wife of Jonas Spangler and daughter of Emanuel Gross, took to her bed November 3rd. Dr. Wallace attended her, making his first visit on the morning of November 3rd, when the temperature was 103.8°. She was probably first taken ill about October 25th. The diagnosis was typhoid fever. She died November 16th.

Sixth case. Clarence Spangler, aged four years, son of Jonas and Hattie Spangler, was taken ill about November 1st; after the death

of his parents he was removed to the home of his grandfather, Emanuel Gross, and put in care of Dr. C. J. Hamme, Dover. Previous to his removal he was attended by Dr. Wallace, who diagnosed the case as typhoid fever. This patient made a good recovery.

Seventh case. Emanuel Gross, aged sixty-nine years, father of Hattie Spangler, was taken ill November 11th, and was attended by Dr. Hamme, who diagnosed the case as typhoid fever. He is now convalescing.

The dwellings occupied by Emanuel Gross and his son-in-law, Jonas Spangler, were not far apart but between them was another house in which a widow Susanna Stough dwelt in the front part while the back building was occupied by Ward Lease and his wife.

Emanuel Gross had on his premises a well which was used for his water supply. This was a dug and walled well, about thirty feet deep, from which hard water is obtained by a chain pump. The covering on this well is in good condition. On the premises occupied by Jonas Spangler there is a drilled well, about forty feet deep, which also gives hard water. This well is in bad condition. It is now nearly dry. The water in this well has been cloudy at times during the summer, and when the Health Officer of Dover Borough pumped this well for ten minutes, November 23rd, he succeeded in pumping it dry. He obtained with the water about one pint of fish worms. I herewith submit a copy of the analysis of water from the respective wells, received November 24th.

	Bacteria per C. C.	B. Coll.
No. 1 Emanuel Gross,	4860	330
No. 2 Emanuel Gross,	4320	600
No. 1 Jonas Spangler,	2640	0
No. 2 Jonas Spangler,	17,820	0
No. 3 Jonas Spangler,	4320	2430

Both these families are supplied with milk by Andrew Brodbeck, who lives in northwest part of Dover Borough and supplies about fifteen families in the Borough. There was no illness in the Brodbeck family, nor in any family to which he furnished milk, except the Gross and Spangler families.

Source of infection. Jonas Spangler was a carpenter and worked on the premises of Harry Fickes, West Manchester Township, from September 29th to October 3rd and again from October 19th to 31st, inclusive. He carried his dinner from his home.

On July 27th, James Fickes, aged fifteen years, son of Harry Fickes, was taken ill with catarrhal-jaundice, was attended by Dr. J. C. Hamme, Dover, who visited him four times, the last visit being August 3rd. Rumor had it that James Fickes had been threatened with typhoid fever, and from this rumor the statement was made that Jonas Spangler contracted typhoid fever while employed on premises of Harry Fickes. If typhoid fever had really existed on

Fickes premises, this would not be sufficient proof that Jonas Spangler contracted his illness there, as his wife had never been on the Fickes premises and she took to her bed about the same time and with the same disease as her husband. I, therefore, conclude from the facts obtained, that Mabel Gross, who was attended for enterocolitis, really had typhoid fever, and must have become infected from water on the Gross or Spangler premises, and the third case, Mary Spangler, probably contracted her illness from Mabel Gross, and the parents, from Mary, their infant child.

I obtained some very interesting facts, which I desire to report. As I have said, the Spangler and Gross premises are separated by one dwelling, which is occupied by Susanna Stough, aged seventy-three years, in the front of the house, who has lived in this house for thirty-six years. She had an attack of typhoid fever fifty years ago. Her water supply is from the well on premises of Jonas Spangler. The back of the Stough building is occupied by Ward Lease and his wife, Nettie Lease, both aged thirty-four years. They have lived here eleven years and also use water from the Spangler well; both are coffee drinkers; he works in a planing mill in Dover; neither one has had typhoid fever.

Mary Gross, aged seventy years, wife of Emanuel Gross, had an attack of typhoid fever thirty-three years ago. The doctor diagnosed her case as typhoid-pneumonia; she was confined to her bed twelve weeks.

Lottie Gross Bott, aged twenty-seven years, widow, daughter of Emanuel Gross, living with her father, has used water from both wells, never had typhoid fever, and remained perfectly well during the illness in the Gross and Spangler families.

DETAILED REPORT OF TYPHOID FEVER AND SUMMARY OF SAME, IN DOVER BOROUGH,
YORK COUNTY, FROM JULY 30th TO NOVEMBER 30th, INCLUSIVE, 1914.

Number of cases diagnosed as typhoid fever,	4
Number of cases diagnosed as enterocolitis,	2
Number of cases not diagnosed,	1
Total number of cases,	7
Number of deaths,	2
Date of onset first case,	July 30th, 1914
Date of onset last case,	November 10th, 1914
Age of youngest case,	16 months.
Age of oldest case,	69 years.

During the year I traveled 1,261 miles by rail, 361 miles by livery consumed 260 hours, in which time 50 inspections were made.

Statistical Summary of Work Done During the Year.

Forms 36 received,	306	Dairy farms inspected for:	
Forms 37 received,	319	Typhoid fever,	20
Examined cases alleged to be:		Diphtheria,	3
Typhoid fever,	30	Scarlet fever,	8
Diphtheria,	14	Total,	31
Scarlet fever,	8	Borough inspected on account of:	
Measles,	1	Typhoid fever,	2
Chicken pox,	14	Whooping cough,	1
Mumps,	1		
Smallpox,	3		

Stock transferred on 1 dairy farm—typhoid fever.

Sale of milk and butter stopped on dairy farms,	25		
		Typhoid fever,	12
		Diphtheria,	7
		Scarlet fever,	6

Schools ordered closed and fumigated,

	16		
Diphtheria,	11	Scarlet fever,	1
Chicken pox,	3	Mumps,	1

Number of communicable diseases reported during year,

	302		
Typhoid fever,	95	Diphtheria,	59
Chicken pox,	54	Whooping cough,	39
Scarlet fever,	23	Mumps,	14
Measles,	7	Erysipelas,	7
Pneumonia,	4		

Premises disinfected on account of tuberculosis,

	25		
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SUMMARY OF IMPORTANT WORK DONE BY HEALTH OFFICERS IN HANDLING COMMUNICABLE DISEASES IN THE VARIOUS COUNTIES OF THE COMMONWEALTH DURING THE YEAR ENDING DECEMBER 31, 1914.

County.	Morbidity reports received.	Premises placarded. (Form 36.)	Premises quarantined.	Premises disinfected. (Form 37.)	Rooms disinfected.	Air space in cubic feet.
Totals,	24,811	19,482	19,021	19,241	40,876	48,371,556
Adams,	128	90	87	97	210	251,733
Allegheny,	701	643	627	593	1,000	1,692,077
Armstrong,	741	468	446	471	975	1,270,894
Beaver,	258	202	199	181	299	320,549
Bedford,	248	246	223	283	744	684,794
Berks,	733	494	506	518	1,010	1,092,013
Blair,	206	187	176	196	484	582,117
Bradford,	393	218	221	264	579	855,136
Bucks,	849	643	623	653	1,132	1,199,843
Butler,	202	168	125	177	482	549,173
Cambria,	1,051	863	849	770	1,813	2,174,065
Cameron,	88	85	84	68	131	145,318
Carlson,	188	173	169	176	311	284,121
Centre,	353	317	298	230	546	554,503
Chester,	501	432	407	482	1,033	1,224,024
Clarion,	365	210	201	195	491	532,285
Clearfield,	338	342	343	337	806	1,085,296
Clinton,	87	86	76	84	175	191,878
Columbia,	228	194	189	186	482	545,549
Crawford,	202	188	161	221	626	704,904
Cumberland,	113	110	117	127	290	617,347
Dauphin,	440	311	279	275	544	529,673
Delaware,	137	104	125	111	213	189,405
Elk,	103	94	93	120	458	492,900
Erie,	264	247	284	245	856	816,430
Fayette,	1,218	1,050	906	1,022	1,502	1,846,233
Forest,	111	109	97	109	300	124,240
Franklin,	460	219	193	217	368	488,120
Fulton,	76	52	49	44	123	196,763
Greene,	36	28	28	35	75	99,990
Huntingdon,	208	173	229	173	534	612,606
Indiana,	638	494	472	472	1,112	1,388,900
Jefferson,	297	189	192	191	538	660,626
Juniata,	96	92	93	103	352	422,724
Lackawanna,	53	49	37	50	122	190,862
Lancaster,	798	624	610	625	1,284	1,843,975
Lawrence,	301	171	267	162	467	657,923
Lebanon,	198	174	176	196	411	428,409
Lehigh,	477	466	436	483	776	880,446
Luzerne,	960	905	811	849	1,616	1,830,883
Lycoming,	495	352	356	377	611	665,136
McKean,	200	144	184	193	509	721,199
Mercer,	125	145	197	114	277	314,751
Mifflin,	279	225	116	153	404	405,563
Monroe,	116	107	105	132	186	209,900
Montgomery,	688	596	600	537	884	1,016,284
Montour,	177	95	94	76	121	244,710
Northampton,	507	436	425	395	937	772,278
Northumberland,	186	192	193	195	842	846,990
Perry,	61	66	42	70	188	346,983
Pike,	25	21	21	17	43	72,418
Potter,	75	50	52	55	132	170,285
Schenlykill,	957	727	739	739	1,517	1,711,957
Snyder,	127	136	93	145	358	525,337
Somerset,	775	540	486	550	1,481	1,797,231
Sullivan,	22	26	23	31	58	71,244
Susquehanna,	565	384	387	336	651	723,273
Tioga,	333	210	233	226	441	513,520
Union,	99	71	86	61	113	139,015
Venango,	291	228	227	260	687	737,588
Warren,	259	179	199	214	542	543,051
Washington,	1,173	791	816	733	1,172	1,699,156
Wayne,	313	216	271	239	490	560,557
Westmoreland,	1,456	1,137	1,143	1,112	1,589	2,014,765
Wyoming,	239	213	221	239	662	690,049
York,	321	231	212	266	661	756,426

DIVISION OF VITAL STATISTICS.

BUREAU OF VITAL STATISTICS.

WILMER R. BATT, *State Registrar.*



GENERAL SUMMARY.

Deaths registered, indexed and tabulated (including stillbirths),	124,923
Births registered, indexed and tabulated (including stillbirths),	227,855
Marriages registered, indexed and tabulated,	67,567
Total records registered, tabulated, indexed and permanently preserved,	<u>420,345</u>

Additional records tabulated:

Medical inspection of school children,	469,169
Tuberculosis Sanatorium cases,	2,949
Tuberculosis Dispensary cases,	11,104
Tuberculosis follow-up records,	5,175
Cases of communicable diseases,	140,682
Total records tabulated,	<u>1,049,424</u>
Certified copies issued,	4,981
Fees returned to State Treasurer for certified copies and searches,	<u>\$2,510 00</u>

MORTALITY.

Deaths from all causes, exclusive of stillbirths, decreased 3,163 as compared with the previous year. The death rate per 1,000 of population (13.9) was the lowest experienced since the establishment

of the State Department of Health when an effective registration of vital statistics was inaugurated. While the proportion per 1,000 of population is the recognized method of expressing death rates, the decline of 2.1 for the year 1914 as compared with the year 1906 is not very impressive. If, however, the rate for 1906, viz: 16.0, had prevailed in 1914 there would have been 131,936 deaths instead of 114,832, the number which actually did occur; the comparative saving being 17,104 lives.

The population, total deaths, and death rates for the nine-year period, 1906-1912, inclusive, were as follows:

	Population.	Total Deaths.	Death Rate.
1906,	7,141,766	114,435	16.0
1907,	7,279,792	115,969	15.9
1908,	7,417,816	112,246	15.1
1909,	7,555,841	111,062	14.7
1910,	7,693,866	119,815	15.6
1911,	7,831,904	111,292	14.2
1912,	7,969,942	111,842	14.0
1913,	8,107,980	117,995	14.5
1914,	8,246,018	114,832	13.9

By a comparison of death rates per 100,000 of population in the several groups of diseases (International Classification) a decrease is noted in each group with the exception of Group 2 (Diseases of the Circulatory System), Group 7 (Diseases of the Puerperal State) and Group 10 (Malformations of the newborn child), which show slight increases.

Group 1, including the acute communicable diseases, and Group 5, diseases of the digestive system, including diarrhoea and enteritis of infants, both show gratifying declines.

The rate of Group 14, including deaths from ill defined and unknown causes, shows a decline from 44.1 to 10.4 in 1914, which indicates a marked increase in accuracy in the statement of causes of death.

As compared with the previous year death rates by months and by quarterly periods show a decline in each of the subdivisions, with the exception of the second quarter.

DEATHS BY MONTHS AND QUARTERS WITH CORRESPONDING
ANNUAL RATES.

	By Months.		By Quarters
	Deaths.	Rates.	Rates.
January,	10,736	15.3	
February,	9,825	15.5	15.9
March,	11,634	16.6	
April,	10,735	15.8	
May,	9,469	13.5	13.5
June,	7,916	11.7	
July,	8,581	12.2	
August,	9,568	13.7	13.2
September,	9,240	13.6	
October,	8,511	12.6	
November,	8,891	13.0	13.1
December,	9,426	13.1	

DEATH RATES PER 100,000 OF POPULATION FOR CERTAIN GROUPS OF DISEASES, INTERNATIONAL CLASSIFICATION, FOR THE YEARS 1906 TO 1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
General diseases,	416.6	402.3	385.2	354.1	373.1	351.1	324.0	349.7	325.7
Diseases of the nervous system and of the organs of special sense,	166.3	167.9	153.2	159.2	153.2	141.3	141.4	135.9	132.1
Diseases of the circulatory system,	149.3	161.7	159.9	159.6	132.7	135.3	122.6	135.9	177.7
Diseases of the respiratory system,	193.7	197.5	187.7	196.3	203.8	165.8	172.6	165.9	177.7
Diseases of the digestive system,	241.7	220.2	219.8	208.8	241.9	184.7	187.0	192.7	181.4
Nonvenereal diseases of the genitourinary system and annexa,	101.1	105.2	101.8	104.5	109.7	103.9	106.0	200.3	181.5
Puerperal state,	16.9	18.0	19.6	18.9	18.7	16.5	109.7	118.3	114.9
Diseases of the skin and cellular tissue,	7.1	7.1	7.1	6.9	6.5	6.0	13.9	17.5	17.5
Diseases of the bones and of the organs of locomotion,	2.8	2.5	2.8	2.7	2.4	2.2	9.4	7.3	6.5
Scarlatina,	22.0	20.5	20.8	20.7	19.1	17.2	17.4	12.2	21.9
Early infancy,	77.2	76.9	75.4	71.9	79.6	83.7	94.9	98.2	91.9
Old age,	20.2	22.2	20.1	18.0	18.1	18.0	17.1	16.6	17.9
External causes,	142.4	149.2	129.8	121.3	119.7	119.4	115.2	118.4	109.8
All defined diseases,	44.1	41.1	36.1	33.9	35.0	33.8	33.6	32.4	30.4

DEATH RATES PER 1,000 OF POPULATION AT CORRESPONDING AGES
1906 TO 1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
Under 5 years,	48.5	44.7	45.3	42.1	45.3	37.5	36.5	39.7	35.8
5 to 14 years,	3.3	3.0	3.1	2.7	2.9	2.6	2.6	2.9	2.7
15 to 24 years,	6.1	6.0	5.3	4.6	4.6	4.5	4.2	4.2	3.9
25 to 34 years,	7.0	7.9	7.0	6.3	6.7	6.2	5.9	6.0	5.8
35 to 44 years,	10.1	10.9	9.5	9.3	9.5	9.2	8.5	8.9	8.6
45 to 54 years,	14.8	15.6	14.9	14.5	15.0	14.5	13.8	14.2	13.9
55 to 64 years,	30.2	30.5	27.8	27.5	27.8	27.0	28.0	28.0	27.8
65 to 74 years,	54.4	63.5	58.7	58.0	61.3	60.0	60.0	60.0	60.0
75 to 84 years,	133.4	140.8	134.6	131.5	131.6	125.8	131.4	122.1	120.2
85 years and over,	282.9	308.6	283.7	330.2	300.2	293.0	287.3	244.4	239.0

TYPHOID FEVER.

Deaths from this cause decreased 399 as compared with the previous year. The death rate per 100,000 of population has shown, with the exception of two trifling variations, a decided decline from year to year. In the nine-year period, 1906-1914, the decline has been 76.0%. The rates for the several years were as follows:

1906	1907	1908	1909	1910	1911	1912	1913	1914
54.8	48.6	33.0	22.7	24.6	21.9	16.4	18.1	13.0

DEATHS FROM TYPHOID FEVER BY MONTHS FOR THE YEARS 1906
TO 1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
Total,	3,917	3,538	2,450	1,712	1,892	1,716	1,310	1,470	1,071
January,	365	475	289	115	130	143	131	92	70
February,	327	374	254	134	124	176	110	84	70
March,	312	286	214	132	133	125	99	65	77
April,	394	240	188	111	125	101	81	81	66
May,	342	237	129	114	91	92	62	105	81
June,	204	176	101	80	78	89	65	97	55
July,	221	186	129	102	80	88	92	111	65
August,	306	268	231	179	208	174	126	173	107
September,	347	378	295	201	275	199	148	201	134
October,	368	350	238	219	284	223	171	196	129
November,	340	290	188	167	208	163	119	137	123
December,	391	278	194	158	151	138	106	128	94

DEATHS FROM TYPHOID FEVER BY SEX AND AGE PERIODS FOR THE YEARS 1906 TO 1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
Total at all ages, ..	3,917	3,538	2,450	1,712	1,892	1,716	1,310	1,470	1,071
Males,	2,393	2,152	1,449	1,023	1,152	1,013	812	905	659
Females,	1,524	1,386	1,001	689	740	673	498	565	412
Under 1 year,	16	17	8	8	3	4	8	4	5
1 to 2 years,	28	19	28	21	10	11	10	8	5
2 to 3 years,	28	30	31	18	22	9	12	16	4
3 to 4 years,	41	42	37	24	13	15	13	19	19
4 to 5 years,	43	34	30	16	29	24	8	11	6
Total under 5 years,	179	142	134	87	77	66	51	61	29
5 to 9 years,	234	155	148	103	111	92	77	93	62
10 to 19 years,	810	736	506	332	376	315	254	307	217
20 to 29 years,	1,317	1,187	734	514	577	526	438	456	377
30 to 39 years,	671	646	425	293	324	331	215	256	191
40 to 49 years,	317	341	230	184	191	189	131	146	107
50 to 59 years,	210	193	164	119	146	113	73	97	63
60 to 69 years,	93	91	76	54	54	56	42	35	47
70 to 79 years,	42	43	26	21	27	25	27	17	16
80 years and over, ..	7	3	7	5	9	3	2	2	2
Unknown age,	7	1	.....	.....	.....	.....	.....	.....	.....

DIPHTHERIA.

Deaths from this cause decreased 174 as compared with the previous year and the death rate per 100,000 of population declined 2.6. The decline for the nine-year period has been 31.7%. The rates for the several years, 1906-1914, were as follows:

1906	1907	1908	1909	1910	1911	1912	1913	1914
34.1	29.4	26.6	26.5	29.0	27.0	25.6	25.9	23.3

DEATHS FROM DIPHTHERIA BY MONTHS FOR THE YEARS 1906 TO 1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
Total,	2,438	2,138	1,970	2,002	2,235	2,111	2,042	2,099	1,925
January,	266	259	221	199	209	203	288	228	227
February,	213	165	207	178	189	188	183	196	163
March,	205	145	173	212	182	199	154	170	178
April,	159	139	133	138	160	150	127	180	145
May,	157	125	92	131	168	115	117	114	85
June,	85	99	95	96	126	98	91	119	96
July,	89	82	84	130	107	107	74	94	76
August,	116	118	108	108	141	81	116	118	99
September,	210	167	154	131	160	156	150	185	161
October,	318	267	225	209	245	272	236	207	150
November,	308	276	232	219	271	284	241	230	265
December,	312	296	246	251	276	258	265	228	226

DEATHS FROM DIPHTHERIA BY SEX AND AGE PERIODS FOR THE
YEARS 1906 TO 1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
Total at all ages...	2,438	2,138	1,970	2,002	2,235	2,111	2,042	2,099	1,925
Males,	1,214	1,115	999	1,070	1,136	1,116	1,040	1,118	970
Females,	1,224	1,023	971	932	1,099	995	1,002	981	955
Under 1 year,	173	170	168	139	178	122	146	139	128
1 to 2 years,	373	351	322	367	379	325	337	355	338
2 to 3 years,	363	337	306	334	361	360	333	333	289
3 to 4 years,	319	267	264	253	239	301	316	276	270
4 to 5 years,	303	248	214	227	326	238	234	247	193
Total under 5 years,	1,531	1,373	1,274	1,350	1,443	1,346	1,371	1,355	1,218
5 to 9 years,	648	529	500	477	556	558	497	538	474
10 to 19 years,	158	167	131	114	158	142	116	138	151
20 to 29 years,	33	33	30	25	41	32	19	21	27
30 to 39 years,	22	14	16	13	11	17	17	21	33
40 to 49 years,	7	6	7	8	7	7	10	11	12
50 to 59 years,	2	7	8	7	11	7	7	5	6
60 to 69 years,	4	5	2	4	3	.....	3	9	2
70 years and over,	3	4	2	4	5	3	2	1	2

SCARLET FEVER.

Deaths from this cause decreased 55 as compared with the previous year and the death rate per 100,000 of population declined 1.0. The rates for the several years, 1906-1914, were as follows:

1906	1907	1908	1909	1910	1911	1912	1913	1914
8.1	9.0	16.4	16.1	14.2	9.6	7.0	11.4	10.4

DEATHS FROM SCARLET FEVER BY MONTHS FOR THE YEARS 1906
TO 1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
Total,	577	657	1,217	1,216	1,094	749	552	915	860
January,	51	65	109	151	127	117	39	60	91
February,	62	63	108	124	112	93	55	87	103
March,	59	57	136	139	109	93	52	99	132
April,	67	40	135	121	103	93	53	73	98
May,	72	39	99	96	115	78	54	95	84
June,	32	42	65	73	98	66	45	79	87
July,	38	29	58	59	64	41	31	63	53
August,	28	41	55	63	71	27	36	42	41
September,	34	52	85	69	58	26	20	42	24
October,	33	63	114	74	68	31	42	70	54
November,	53	77	127	88	87	34	55	93	46
December,	48	89	126	159	82	50	70	112	52

DEATHS FROM SCARLET FEVER BY SEX AND AGE PERIODS FOR THE YEARS 1906 TO 1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
Total at all ages,	577	657	1,217	1,216	1,094	749	552	915	860
Males,	270	326	621	632	591	384	288	437	429
Females,	307	331	596	684	593	365	264	478	431
Under 1 year,	43	26	62	72	64	46	34	56	34
1 to 2 years,	69	100	154	164	126	103	69	97	104
2 to 3 years,	90	100	191	214	180	113	78	122	111
3 to 4 years,	92	89	170	171	150	113	89	103	102
4 to 5 years,	62	79	130	123	137	85	77	109	77
Total under 5 years,	356	394	707	754	657	460	337	457	428
5 to 9 years,	171	192	340	314	308	169	152	282	262
10 to 19 years,	34	49	109	106	91	71	42	97	108
20 to 29 years,	10	15	32	28	27	33	14	29	43
30 years and over,	5	7	13	14	11	16	7	20	19
Unknown age,	1	.....	.....	.....	.....	.....	.....	.....	.....

MEASLES.

Deaths from this cause decreased 1,029 as compared with the previous year and the death rate decreased 12.8. The present rate is the lowest for the nine-year period, 1906-1914, inclusive. The rates per 100,000 of population for the individual years, 1906-1914, were as follows:

1906	1907	1908	1909	1910	1911	1912	1913	1914
20.5	9.8	16.4	14.0	16.1	10.3	10.6	19.5	6.7

DEATHS FROM MEASLES BY MONTHS FOR THE YEARS 1906 TO 1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
Total,	1,463	714	1,215	1,060	1,237	804	845	1,578	649
January,	99	40	187	80	122	92	72	210	46
February,	136	39	163	81	154	105	66	238	62
March,	164	70	176	145	152	141	94	311	68
April,	186	90	180	163	174	170	99	262	106
May,	173	99	181	171	170	132	80	195	62
June,	153	100	107	86	137	49	88	98	51
July,	122	73	67	73	91	31	66	74	35
August,	98	46	30	54	53	11	34	58	13
September,	93	16	15	27	35	15	24	22	7
October,	83	18	25	38	27	10	32	24	17
November,	86	42	30	48	41	19	66	38	34
December,	63	81	54	94	81	29	124	43	43

DEATHS FROM MEASLES BY SEX AND AGE PERIODS FOR THE
YEARS 1906 TO 1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
Total at all ages,	1,463	714	1,215	1,060	1,237	804	845	1,578	549
Males,	785	380	640	576	664	411	447	855	265
Females,	678	334	575	484	573	393	398	693	284
Under 1 year,	366	206	291	286	306	202	202	391	133
1 to 2 years,	478	231	411	358	404	273	308	562	210
2 to 3 years,	210	112	179	166	201	117	131	256	75
3 to 4 years,	116	48	103	78	105	71	52	105	30
4 to 5 years,	70	31	64	46	67	41	42	58	20
Total under 5 years,	1,240	628	1,048	934	1,083	704	735	1,372	473
5 to 9 years,	129	51	116	77	98	54	68	111	39
10 to 19 years,	47	13	27	23	30	25	24	49	19
20 to 29 years,	21	10	5	12	10	10	5	19	7
30 to 39 years,	11	5	13	4	10	6	8	11	4
40 to 49 years,	7	6	4	5	3	4	2	6	1
50 years and over,	5	1	2	5	3	1	3	10	6
Unknown age,	3	.....	.....	.....	.....	.....	.....	.....	.....

WHOOPING COUGH.

Deaths from this cause increased 41 as compared with the previous year, and the death rate per 100,000 of population, 11.4, was lower than at any time for the nine-year period, 1906-1914, with the exception of 1912. The rates for the individual years were as follows:

1906	1907	1908	1909	1910	1911	1912	1913	1914
21.7	17.7	17.0	12.0	14.5	12.7	10.2	11.7	11.4

DEATHS FROM WHOOPING COUGH BY MONTHS FOR THE YEARS
1906 TO 1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
Total,	1,550	1,287	1,264	910	1,114	998	809	898	929
January,	83	73	85	74	64	87	62	51	84
February,	96	91	110	90	79	106	93	62	109
March,	98	98	105	92	102	117	73	84	123
April,	123	118	143	91	106	117	94	77	1.0
May,	131	111	123	88	90	120	81	86	128
June,	178	112	112	90	75	75	69	93	83
July,	185	154	153	105	117	80	70	98	75
August,	176	173	158	84	140	78	74	96	64
September,	142	145	88	58	105	64	47	72	35
October,	121	85	59	56	83	47	50	53	31
November,	118	63	63	45	78	43	41	64	44
December,	99	64	65	37	75	64	55	77	33

DEATHS FROM WHOOPING COUGH BY SEX AND AGE PERIODS FOR THE YEARS 1906 TO 1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
Total at all ages,	1,550	1,287	1,264	910	1,114	998	809	898	939
Males,	679	612	532	417	483	468	366	418	479
Females,	871	675	732	493	631	530	443	480	510
Under 1 year,	881	731	679	500	581	567	476	503	509
1 to 2 years,	351	338	312	245	285	259	195	201	239
2 to 3 years,	135	114	122	78	109	75	59	89	88
3 to 4 years,	83	52	77	22	59	42	35	44	40
4 to 5 years,	41	25	32	25	34	17	12	20	20
Total under 5 years,	1,491	1,260	1,222	870	1,068	960	777	857	896
5 to 9 years,	51	20	37	32	41	34	24	35	32
10 years and over,	6	7	6	8	5	4	8	6	11
Unknown age,	2	.....	.....	.....	.....	.....	.....	.....	.....

TUBERCULOSIS.

Deaths from all forms of tuberculosis increased 410 as compared with the previous year. The death rates per 100,000 of population for the nine-year period, 1906-1914, were as follows:

1906	1907	1908	1909	1910	1911	1912	1913	1914
150.9	148.7	137.8	133.9	133.7	135.2	123.9	120.9	123.8

The distribution of the deaths among the several forms of tuberculosis with the percentage in each form was as follows:

	Deaths.	Per cent.
Tuberculosis of lungs,	8,444	82.7
Acute miliary tuberculosis,	397	3.9
Tuberculous meningitis,	657	6.4
Abdominal tuberculosis,	332	3.2
Pott's disease,	134	1.3
White swelling,	73	0.7
Tuberculosis of other organs,	161	1.6
Disseminated tuberculosis,	64	0.6

TUBERCULOSIS OF THE LUNGS.

Deaths from tuberculosis of the lungs increased 337 as compared with the previous year. The death rates per 100,000 of population for the nine-year period, 1906-1914, were as follows.

1906	1907	1908	1909	1910	1911	1912	1913	1914
129.6	127.9	117.3	115.1	114.0	112.8	103.5	100.0	102.4

DEATHS FROM TUBERCULOSIS OF THE LUNGS BY MONTHS FOR THE YEARS 1906 TO 1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
Total,	9,258	9,317	8,703	8,699	8,775	8,832	8,251	8,107	8,444
January,	739	804	819	767	771	785	801	753	758
February,	766	805	829	750	794	798	805	757	731
March,	980	976	919	936	1,010	870	852	801	868
April,	876	965	786	848	838	896	812	771	830
May,	836	829	795	838	732	785	743	744	833
June,	704	727	692	663	646	761	650	662	664
July,	708	717	655	667	685	685	628	601	623
August,	740	698	624	592	667	663	606	608	667
September,	645	594	626	572	616	597	591	559	649
October,	766	702	586	654	655	579	582	572	665
November,	673	679	683	691	656	654	577	602	605
December,	825	821	689	716	705	754	604	677	651

DEATHS FROM TUBERCULOSIS OF THE LUNGS BY SEX AND AGE PERIODS FOR THE YEARS 1906 TO 1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
Total at all ages.	9,258	9,317	8,703	8,699	8,775	8,832	8,251	8,107	8,444
Males,	4,786	4,896	4,691	4,721	4,574	4,814	4,578	4,513	4,888
Females,	4,472	4,421	4,012	3,978	4,201	4,018	3,673	3,594	3,556
Under 1 year,	212	239	167	134	138	139	112	97	134
1 to 2 years,	103	96	92	95	87	59	55	65	50
2 to 3 years,	56	51	54	41	47	37	29	26	23
3 to 4 years,	29	36	31	36	18	32	19	26	25
4 to 5 years,	27	23	25	24	20	16	21	16	14
Total under 5 years,	427	445	369	330	310	283	236	230	216
5 to 9 years,	89	92	88	83	69	78	72	68	54
10 to 19 years,	950	853	758	785	701	736	691	662	650
20 to 29 years,	2,456	2,382	2,323	2,396	2,364	2,313	2,179	2,086	2,195
30 to 39 years,	2,164	2,176	2,030	2,016	2,103	2,092	1,921	1,930	1,966
40 to 49 years,	1,319	1,442	1,393	1,321	1,417	1,404	1,404	1,311	1,454
50 to 59 years,	877	924	861	844	814	922	868	813	963
60 to 69 years,	562	644	547	532	567	651	545	586	593
70 to 79 years,	312	346	280	263	280	292	276	272	271
80 years and over,	47	55	58	68	50	61	59	63	60
Unknown age,	25	7	1	1	.....	.....	.....	1	2

CANCER.

Deaths from cancer and malignant tumors in all forms as compared with the previous year increased 143, which gave but a slightly increased death rate, although maintaining the tendency of deaths from this cause to increase from year to year. The death rates for the several years of the nine-year period, 1906-1914, were as follows:

1906	1907	1908	1909	1910	1911	1912	1913	1914
58.9	60.7	60.9	64.1	66.3	66.4	68.4	72.2	72.7

DEATHS FROM CANCER AND OTHER MALIGNANT TUMORS BY ORGAN OR LOCALITY, 1906-1914, INCLUSIVE.

	Total.	Buccal Cavity.	Stomach, Liver.	Peritoneum, Intestines, Rectum.	Female Genital organs.	Breast.	Skin.	Other organs or unspecified.
1906,	4,208	160	1,620	440	595	399	160	834
1907,	4,420	114	1,666	480	640	368	188	926
1908,	4,520	177	1,733	502	738	452	169	749
1909,	4,845	185	2,008	570	714	502	217	649
1910,	5,100	207	2,098	699	768	513	176	739
1911,	5,197	192	2,113	658	833	480	181	720
1912,	5,426	229	2,212	676	859	554	180	716
1913,	5,854	231	2,336	752	974	560	213	788
1914,	5,997	294	2,345	723	943	649	222	821

DISEASES OF THE NERVOUS SYSTEM.

Deaths from diseases of the nervous system as compared with the previous year decreased 126. The death rate per 100,000 of population decreased from 135.9 to 132.1. Cerebral hæmorrhage and apoplexy maintained its position as the most frequent cause of death in this group, contributing 56.8% of the total.

DISEASES OF THE CIRCULATORY SYSTEM.

Diseases of the circulatory system as compared with the previous year show an increase of 1,208, and the death rate per 100,000 of population increased from 165.9 to 177.7. Organic diseases of the heart contributed 72% of the total.

DISEASES OF THE RESPIRATORY SYSTEM.

Deaths from diseases of the respiratory system as compared with the previous year decreased 467, and the death rate per 100,000 of population decreased from 192.7 to 181.4. Pneumonia, exclusive of broncho pneumonia, contributed 45.7% of the total deaths in this group.

DISEASES OF THE DIGESTIVE SYSTEM.

Deaths from diseases in this group as compared with the previous year decreased 1,272. The death rate per 100,000 of population decreased from 200.3 to 181.5. The latter figure represents the lowest death rate during the nine-year period, 1906-1914, inclusive. Nearly four-tenths of this decline is to be found in the decrease in the deaths from diarrhoea and enteritis under one year of age which dropped from 6,982 to 6,495.

NONVENEREAL DISEASES OF THE GENITOURINARY SYSTEM.

As compared with the previous year deaths in this group declined 119, and the death rate per 100,000 of population declined from 118.3 to 114.9. Of the total of 9,475 deaths in this group acute nephritis and Bright's disease were responsible for 8,272 deaths, nearly nine-tenths of them.

EXTERNAL CAUSES.

Deaths in this group as compared with the previous year decreased 550, and the death rate per 100,000 of population decreased from 118.4 to 109.8. Automobile injuries were responsible for 287 deaths, street car accidents and injuries for 180 deaths, and 105 lives were lost in burning buildings.

A comparison of the principal forms of violence for the nine-year period, 1906-1914, is as follows:

DEATHS FROM EXTERNAL CAUSES, 1906-1914, INCLUSIVE.

	Suicide.	Burns and scalds.	Drowning (accidental).	Gunshot wounds (accidental).	Injuries in mines.	Steam railway injuries.	Homicide.
1906,	789	847	555	119	983	2,159	365
1907,	892	971	566	139	1,508	2,131	406
1908,	988	861	573	150	1,325	1,467	295
1909,	951	824	493	131	1,248	1,386	331
1910,	975	831	496	133	1,222	1,521	362
1911,	1,033	784	666	138	1,311	1,395	317
1912,	1,032	893	502	136	1,136	1,458	352
1913,	1,073	855	566	142	1,302	1,455	432
1914,	1,035	847	521	124	1,119	1,224	397

TABULATIONS CONCERNING THE DEATHS OF THE YEAR.

The following general mortality tables are presented:

Table 1. Deaths from all causes in the entire State and for each municipality having more than 5,000 population, for groups of municipalities having less than 5,000 population, and for each county exclusive of all municipalities; by months. (Stillbirths excluded).

Table 2. Deaths from each cause and class of causes (International Classification) by sex and age periods. (Stillbirths excluded).

Table 3. Deaths in the entire State and in each municipality having more than 10,000 population, and for the rural sections of each county, including all municipalities having less than 10,000 population, by age periods; and in certain municipalities by color. (Stillbirths excluded).

Table 4. Deaths in the entire State and for each municipality having more than 10,000 population, and for the rural sections of each county, including all municipalities having less than 10,000 population, from certain specified causes; and for certain cities by color. (Stillbirths excluded).

Table 5. Deaths in the entire State for each municipality having more than 10,000 population and for the rural section of each county, including all municipalities having less than 10,000 population; by color, nativity, and parent nativity. (Stillbirths excluded).

Table 6. Deaths in the entire State by sex, age, color, nativity, and parent nativity. (Stillbirths excluded).

Table 7. Deaths in the entire State and for municipalities of more than 100,000 population, from certain causes, by months and color. (Stillbirths excluded).

Table 8. Deaths in the entire State and in cities having more than 100,000 population, from certain causes and by color by subdivisions of days, weeks, and months for the first year of life. (Stillbirths excluded).

MORTALITY TABLE I.

Deaths from all causes in the Entire State and for Each Municipality Having More Than 5,000 Population, for Groups of Municipalities Having Less than 5,000 Population, and for each County Exclusive of all Municipalities, by Months. (Stillbirths Excluded.)

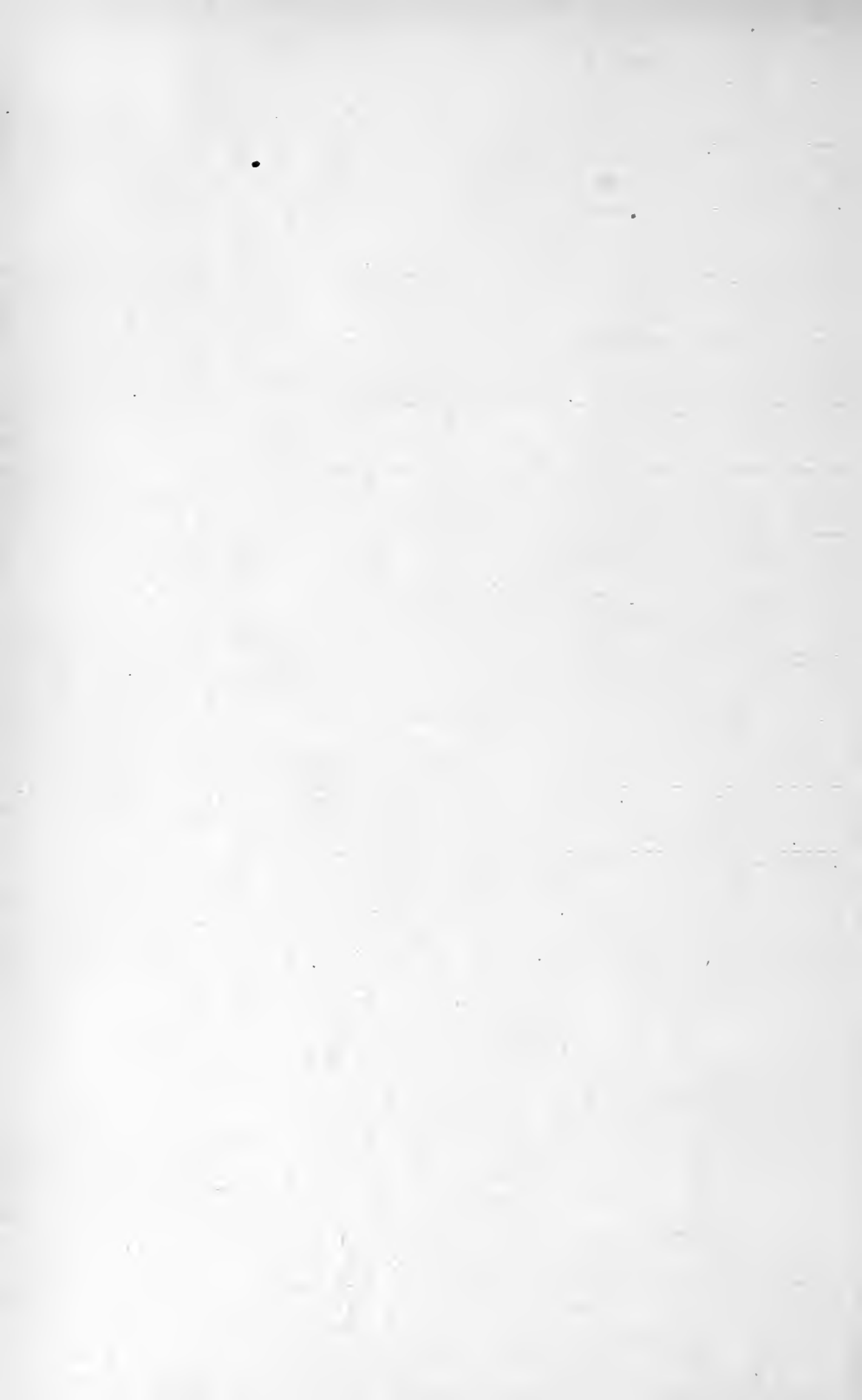
Registration Area.	Month of Death.											
	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
All Deaths.	114,832	9,825	11,634	10,735	9,469	7,916	8,531	9,563	9,240	8,311	8,391	9,423
Entire State,	68,832	5,969	7,100	6,379	5,648	4,783	5,313	5,766	5,234	5,153	5,302	5,739
Total all municipalities having more than 5,000 population,	13,492	1,038	1,331	1,231	1,153	904	963	1,138	1,128	1,065	1,027	1,065
Total all municipalities having less than 5,000 population,	32,507	2,768	3,203	3,075	2,668	2,229	2,300	2,614	2,373	2,573	2,562	2,632
Total rural (exclusive of all municipalities),												
Municipalities (5,000 and Over).												
Allentown,	907	80	96	74	84	66	68	73	72	68	76	73
Altoona,	811	72	80	82	62	57	65	43	57	76	57	66
Atioga,	90	4	7	7	9	6	6	14	14	2	6	6
Ambridge,	111	10	13	10	11	9	6	10	9	9	8	9
Archbald,	85	11	11	6	6	3	4	10	6	6	4	7
Ashland,												
Ashley,	88	7	15	6	5	5	5	11	10	5	5	7
Bangor,	63	6	11	3	5	1	1	7	7	2	6	6
Beaver Falls,	188	13	21	13	13	19	15	13	11	11	12	13
Bellevue,	97	7	9	14	6	10	5	7	4	8	7	10
Berwick (Columbia),	59	3	3	3	6	2	3	5	4	3	5	6
Bethlehem,	165	16	9	16	14	14	11	16	11	9	15	14
Blakely,	114	8	12	10	13	13	6	8	6	6	9	13
Bloomburg,	9	12	12	10	6	11	6	11	7	14	7	17
Bradock,	236	33	46	43	30	24	19	39	29	22	23	30
Bradford,	224	19	17	26	20	18	13	13	19	23	13	25

Bristol,	125	8	15	13	16	9	12	8	7	11	9
Butler,	284	25	17	18	18	29	22	20	20	22	22
Carholdale,	282	18	38	29	29	24	22	22	28	26	19
Carlisle,	153	19	16	13	11	8	6	15	13	13	13
Carver,	115	13	13	13	11	5	4	9	11	10	3
Carrick,	78	12	6	12	3	5	2	5	5	7	6
Catasauqua,	59	7	5	3	3	5	3	3	4	4	4
Chambersburg,	213	15	25	24	22	16	21	10	15	30	30
Charleroi,	86	4	8	9	5	7	5	8	10	6	7
Chester,	693	73	47	68	62	53	50	66	75	55	65
Clearfield,	78	9	10	6	7	6	8	4	6	4	6
Coaldale (Schuylkill),	144	11	14	12	10	8	8	12	13	22	11
Cotatesville,	181	10	11	14	10	7	9	10	10	13	11
Columbia,	160	13	11	11	7	19	7	16	15	10	18
Connellsville,	185	18	16	23	20	14	15	10	13	11	12
Conshohocken,	98	16	6	10	11	9	6	5	13	10	6
Corasopolis,	47	2	2	4	8	3	3	3	3	2	2
Corry,	148	16	9	15	14	13	10	7	15	10	8
Danville,	104	11	9	11	10	7	6	8	7	11	7
Darby,	79	8	10	13	9	4	6	7	4	3	5
Dickson City,	142	9	12	16	12	9	9	16	23	12	6
Donora,	199	23	13	21	12	11	20	13	16	14	17
DuBois,	345	24	12	13	12	10	21	6	10	8	10
Dunmore,	22	22	31	22	27	25	23	25	41	27	36
Duquesne,	213	16	9	20	27	12	16	32	13	15	15
Duryea,	127	13	11	10	6	6	11	7	12	11	17
East Pennsylvania,	73	7	11	10	7	4	3	4	4	4	6
East Pittsburg,	46	4	9	1	1	1	6	3	3	3	7
Easton,	508	40	43	52	40	50	30	45	40	42	42
Edwardsville,	108	6	11	5	5	13	11	11	12	9	9
Erie,	1,057	96	66	111	89	111	77	83	87	80	81
Etna,	8	8	7	9	6	6	6	7	7	4	5
Farrell,	156	14	9	21	20	5	8	15	10	10	11
Forest City,	78	4	7	5	1	8	1	6	10	9	4
Franklin (Venango),	101	12	6	10	5	9	15	8	11	9	7
Freeland,	149	5	11	11	8	7	4	1	25	43	10
Gilberton,	89	7	4	8	7	7	2	7	10	9	8
Glassport,	59	8	4	4	4	3	9	1	4	5	4
Greensburg,	231	18	24	19	19	19	16	20	16	25	19
Greenville,	94	9	3	10	15	13	5	4	4	11	7
Hanover,	103	12	10	14	8	11	8	10	5	4	3
Harrisburg,	967	96	69	107	109	77	68	67	77	75	78
Hazleton,	424	37	35	45	43	43	29	30	38	35	45
Homestead,	259	12	27	32	24	20	17	26	23	29	19
Huntingdon,	125	12	19	15	16	7	9	8	10	6	6

TABLE 1—Continued.

Registration Area.	All Deaths.	Month of Death.											
		Jan.	Feb.	Mar.	Aprtl.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Indiana,	76	9	6	7	7	8	8	6	7	5	3	2	
Jeanette,	94	9	10	6	6	6	6	11	7	9	8	8	
Jersey Shore,	65	6	6	4	3	3	3	1	3	6	2	10	
Johnstown,	919	84	92	86	88	63	80	82	85	66	68	76	
Juniata,	61	7	6	12	6	6	6	4	4	5	3	6	
Kane,	96	6	6	3	3	7	7	10	8	9	7	10	
Kingston,	89	3	7	12	11	7	7	12	9	6	7	7	
Knoxville (Allegheny),	49	6	5	4	4	4	4	3	5	3	3	2	
Lancaster,	703	64	73	61	66	46	64	64	61	50	60	66	
Lansford,	117	10	10	17	6	10	10	6	13	9	12	12	
Larksville,	119	16	7	10	10	9	13	10	10	6	3	12	
Latrobe,	178	3	17	13	13	7	11	6	8	9	14	6	
Lebanon,	378	28	26	37	34	18	27	24	20	27	21	25	
Lehighon,	68	0	5	8	6	4	6	2	5	4	7	11	
Lewistown,	93	11	11	8	8	3	5	5	12	9	4	8	
Lock Haven,	141	11	15	16	15	11	6	6	10	11	9	8	
Luzerne,	61	4	4	7	4	8	6	9	9	4	4	6	
McKeesport,	610	54	64	64	61	46	65	68	47	43	48	47	
McKees Rocks,	185	14	20	20	12	9	20	18	21	15	8	18	
Mahoney City,	187	14	9	15	18	15	13	18	18	15	16	16	
Meadville,	198	25	22	12	20	17	12	16	22	13	17	9	
Middletown,	73	6	6	9	10	8	5	5	6	7	5	5	
Millvale,	101	7	4	8	4	8	12	11	3	14	14	14	
Milton,	97	13	8	6	6	5	2	9	6	9	12	13	
Minersville,	114	11	6	13	17	3	14	14	8	6	4	13	
Monessen,	184	14	10	17	9	14	22	21	23	20	14	9	
Monongahela,	97	10	13	9	5	11	7	13	9	6	4	4	
Mount Carmel,	212	22	19	13	14	15	17	19	23	20	19	14	
Mount Pleasant,	83	9	6	6	4	7	6	9	11	8	3	8	
Munhall,	69	3	8	4	4	3	3	3	7	6	3	6	
Nanticoke,	371	24	27	32	33	18	20	40	30	29	84	15	
New Brighton,	136	18	12	9	12	13	7	11	13	7	8	9	
New Castle,	464	36	32	68	45	38	23	52	26	44	90	41	
New Kensington,	101	6	6	11	6	13	11	12	11	8	1	9	
Norristown,	643	69	63	77	60	54	42	53	42	42	49	46	

North Braddock,	135	11	2,365	2,565	2,171	1,823	2,107	1,857	1,864	11	12	13	14	8
Northampton,	133	14	13	8	14	13	17	8	21	11	12	13	14	8
Old City,	248	23	22	21	26	27	24	21	21	12	13	14	15	16
Old Forge,	199	18	18	23	21	18	16	15	11	11	11	11	11	14
Olyphant,	128	12	12	9	13	13	3	17	17	17	17	17	17	11
Philadelphia,	26,739	2,681	2,365	2,565	2,171	1,823	2,107	1,857	1,864	11	12	13	14	8
Phoenixville,	8,357	21	10	18	9	13	9	20	21	20	21	21	21	19
Pittsburgh,	347	848	836	961	783	719	600	673	713	26	27	28	29	664
Pittston,	209	17	22	23	21	26	21	31	35	27	27	27	27	22
Plymouth,	263	17	13	15	14	13	13	13	20	14	14	14	14	13
Pottstown,	264	18	15	28	14	13	15	21	22	20	20	20	20	19
Pottsville,	263	25	22	20	25	20	24	26	24	26	26	26	26	28
Proctorville,	163	14	16	19	16	21	13	10	20	16	16	16	16	12
Providence,	101	11	13	9	7	7	8	14	9	8	8	8	8	16
Randall,	1,453	135	125	144	135	116	100	126	109	116	109	107	107	112
Ridgway,	71	11	5	3	4	9	6	7	5	5	5	5	5	4
Rochester,	139	15	12	16	11	11	9	12	7	11	11	11	11	14
Saint Clair (Allegheny),	50	4	2	4	3	1	2	5	4	4	4	4	4	8
Saint Clair (Schuylkill),	82	8	9	4	6	5	5	7	6	6	6	6	6	8
Saint Marys,	71	4	7	8	9	3	6	6	4	4	4	4	4	3
Saxre,	192	21	12	13	19	18	21	18	24	16	16	16	16	13
Scottsdale,	43	4	1	7	2	8	3	5	3	3	3	3	3	4
Seranton,	2,231	157	177	201	178	180	170	189	172	180	172	170	170	222
Shamokin,	239	27	18	20	29	17	13	16	18	23	23	23	23	20
Sharon,	207	13	22	23	23	11	15	15	13	15	15	15	15	14
Sharpsburg,	94	7	13	10	7	10	8	13	4	4	4	4	4	4
Shenandoah,	400	33	36	40	33	34	38	38	49	43	43	41	41	31
South Bethlehem (Northampton),	286	27	22	22	28	28	22	20	21	29	29	28	28	18
Steelton,	170	17	11	21	17	8	11	20	17	13	14	14	14	11
Sumbury,	165	16	18	8	15	14	10	13	12	14	14	14	14	12
Swissvale,	83	12	4	4	4	6	5	6	9	11	11	10	10	6
Swoyersville,	176	5	4	5	4	4	8	8	3	8	8	8	8	5
Tamaqua,	121	8	18	15	10	9	5	5	9	9	9	9	9	12
Tarapuram,	112	14	15	5	5	12	7	7	10	8	8	8	8	14
Taylor,	183	13	11	9	16	27	22	19	13	13	13	13	13	7
Throop,	82	6	4	13	9	8	9	4	4	4	4	4	4	6
Titusville,	141	17	15	13	11	8	11	7	12	12	12	12	12	9
Tyone,	186	19	19	13	10	9	9	7	8	8	8	8	8	9
Uniontown (Phyerie),	276	21	19	30	20	25	28	20	27	27	27	27	27	24
Warren,	161	13	14	16	15	15	10	15	12	13	13	13	13	12
Washington,	303	25	32	37	61	22	17	19	27	20	20	20	20	25
Waynesboro,	66	8	9	6	5	6	3	3	5	5	5	5	5	5
West Berwick,	62	9	6	7	3	3	1	1	7	7	7	7	7	5
West Chester,	283	28	17	23	37	22	17	25	19	25	25	25	25	18
West Pittston,	87	10	7	9	10	6	4	4	6	6	6	6	6	4

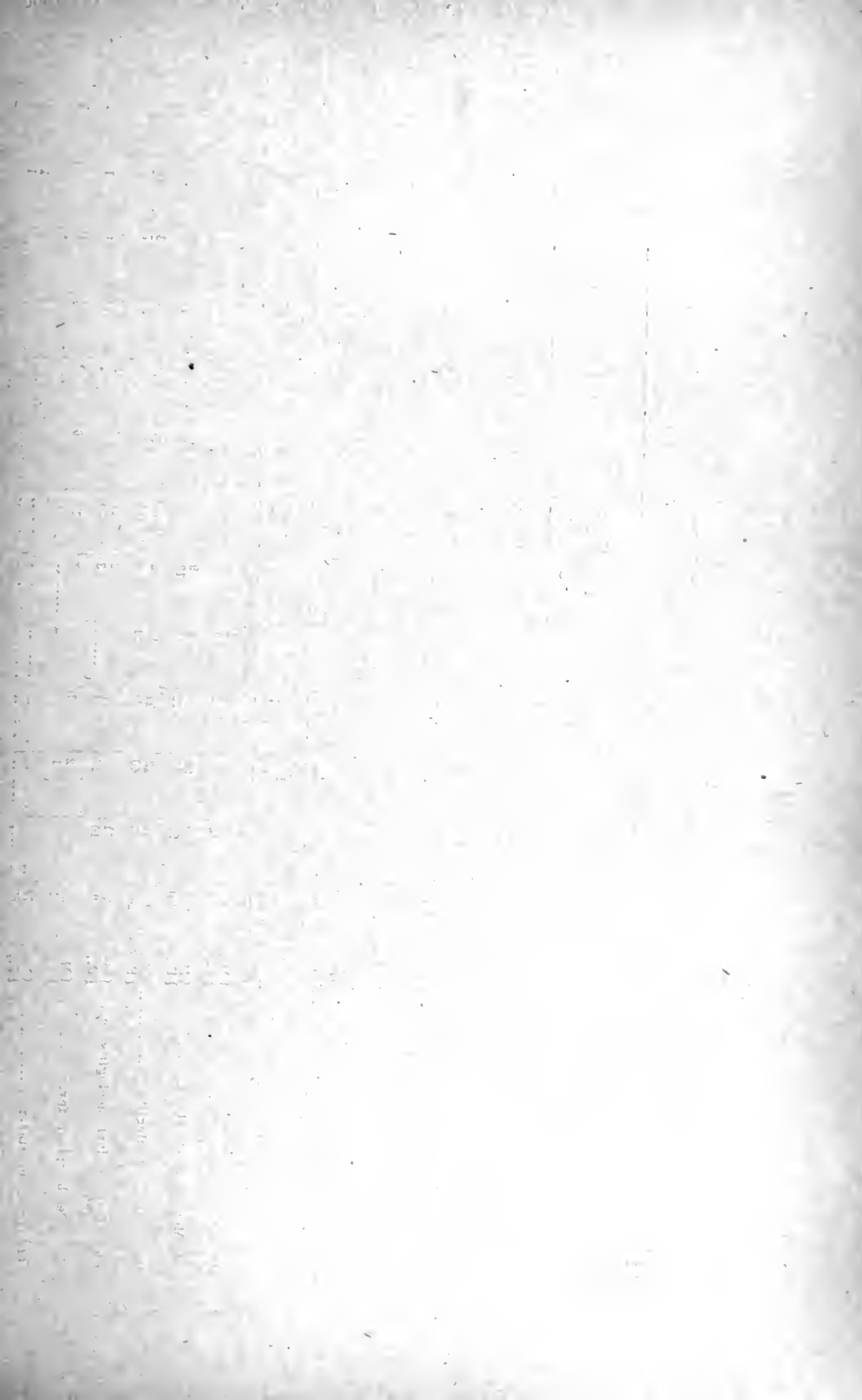


MORTALITY TABLE 2.

Deaths in the Entire State from Each Cause and Class of Causes, by Sex and Age. (Stillbirths Excluded.)

Classification.	Cause of Death.	Age.													
		All ages.	Under 1.	1.	2.	3.	4.	Under 5.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.
	ALL CAUSES,	114,832	25,146	4,775	2,014	1,345	928	34,208	2,757	1,654	2,569	3,704	4,086	4,124	4,726
	Males,	62,523	11,156	2,544	1,082	737	465	18,984	1,406	869	1,472	2,050	2,260	2,357	2,740
	Females,	52,309	10,990	2,231	932	608	463	15,224	1,351	784	1,137	1,654	1,826	1,767	1,986
	I. GENUINE DISEASES,	26,589	1,879	1,224	725	590	403	4,821	1,264	646	1,026	1,611	1,703	1,518	1,744
	Males,	13,567	986	619	376	321	188	2,400	619	281	493	810	901	840	971
	Females,	13,252	893	605	349	269	215	2,421	645	365	533	792	802	708	773
1	Typhoid fever, { M., } F.,	659 412	1 4	..... 5	4	10 9	1 5	16 23	34 28	33 33	91 60	103 76	95 53	61 35	68 27
2	Typhus fever, { M., } F.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	Relapsing fever, { M., } F.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	Malaria, { M., } F.,	9 11	.....	.....	.....	.....	.....	.....	.....	1	.....	1	1	.....	1
5	Smallpox, { M., } F.,	3 1	1	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....
6	Measles, { M., } F.,	265 284	73 65	101 109	37 38	12 10	10 10	223 240	16 23	5 7	3 4	3 3	1	1	3
7	Scarlet fever, { M., } F.,	429 431	14 20	52 52	64 47	54 48	36 42	219 209	127 135	37 32	17 22	12 12	10 9	2 5	8 2
8	Whooping cough, { M., } F.,	429 510	237 272	107 132	43 46	18 22	8 12	413 483	12 20	2 4	.....	.....	.....	.....	.....

9	Diphtheria and croup,	{M., F.,	970 865	69 59	181 157	153 136	160 110	97 96	660 558	219 256	46 75	17 14	2 13	3 9	5 10
10	Influenza,	{M., F.,	329 431	36 25	6 8	4	2 3	1	49 36	8 7	2 5	5 6	3 10	8 8	8 10
11	Miliary fever,	{M., F.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12	Asiatic cholera,	{M., F.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13	Cholera nostras,	{M., F.,	31 24	7 6	1 1	1	1	2 1	12 8	3 1	1	1	.....	1	1
14	Dysentery,	{M., F.,	105 119	25 26	18 19	4 7	5 4	52 3	52 59	3 5	3	1	2	4	3 3
15	Plague,	{M., F.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16	Yellow fever,	{M., F.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17	Leprosy,	{M., F.,	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
18	Erysipelas,	{M., F.,	199 150	54 44	9 5	1 1	.....	2	64 62	2	1	.....	3	5	10 6
19	Other epidemic diseases,	{M., F.,	25 18	5 8	5 3	3 3	1 1	2	16 15	4 1	2 1	.....	1	.....	.....
20	Purulent infection and septicaemia,	{M., F.,	120 73	21 13	2 4	.....	2	1	25 22	6 2	5 2	1	2	2	12 5
21	Glanders,	{M., F.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22	Anthrax,	{M., F.,	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
23	Bubles,	{M., F.,	8	1	.....	.....	1	1	2	1	1	.....	1	1	.....
24	Tetanus,	{M., F.,	82 33	9 7	3 3	.....	2	2	1	16 8	9 3	6	9	4	5 1
25	Mycoses,	{M., F.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
26	Pellagra,	{M., F.,	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....



63	Other diseases of the spinal cord (total).	209 185	7 8	8 6	2 6	1 1	2 3	20 24	5 6	1 2	6 3	6 4	5 4	4 2
63a	Acute anterior poliomyelitis.	31 34	7 6	6 6	2 5	1	2 2	18 19	4 5	.....2	1 2	1 .....	.....	1
63b	*Other diseases of the spinal cord.	178 161	.....2	.....2	.....1	.....1	.....1	2 5	1	1	5 1	5 4	5 6	3 2
64	Cerebral haemorrhage, apoplexy.	3,108 3,084	16 14	4 1	3 1	2 1	.....1	25 18	1 3	1 1	8	10 6	12 11	24 17
65	Softening of the brain.	71 72	.....	.....	.....	.....	.....	.....	1 .....	.....	.....	.....	1.....	.....
66	Paralysis without specified cause.	379 401	5 2	2 2	1	1 1	.....1	9 6	1	1	2 4	.....1	1 2	5
67	General paralysis of the insane.	399 161	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25 10
68	Other forms of mental alienation.	58 84	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9 10
69	Epilepsy.	186 117	6 6	2	3 1	1 1	1	13 8	6 5	11 8	24 9	19 8	16 17	12 11
70	Convulsions (nonpuerperal).	11 13	.....	.....	.....	.....	.....	.....	4 5	.....2	.....	.....2	.....1	.....
71	Convulsions of infants.	479 384	414 320	45 44	14 13	4 5	2 2	479 284	.....	.....	.....	.....	.....	.....
72	Chorea.	9 12	.....	.....	.....	.....	1 1	1 1	1 1	2 4	2.....	.....1	.....1	.....
73	Neuralgia and neuritis.	16 27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
74	Other diseases of the nervous system.	133 135	13 9	6 3	3 2	.....4	.....	22 18	4 3	8 6	3 6	7 6	7 2	14 8
75	Diseases of the eyes and their annexa.	3 2	.....	.....	.....	.....	.....	1.....	.....	.....	.....	.....	.....	.....
76	Diseases of the ears.	89 52	12 10	11 2	1 4	.....1	.....	27 17	9 8	4 6	4 2	10 3	4 2	1 1

*Exclusive of acute anterior poliomyelitis (infantile paralysis).

TABLE 2—Continued.

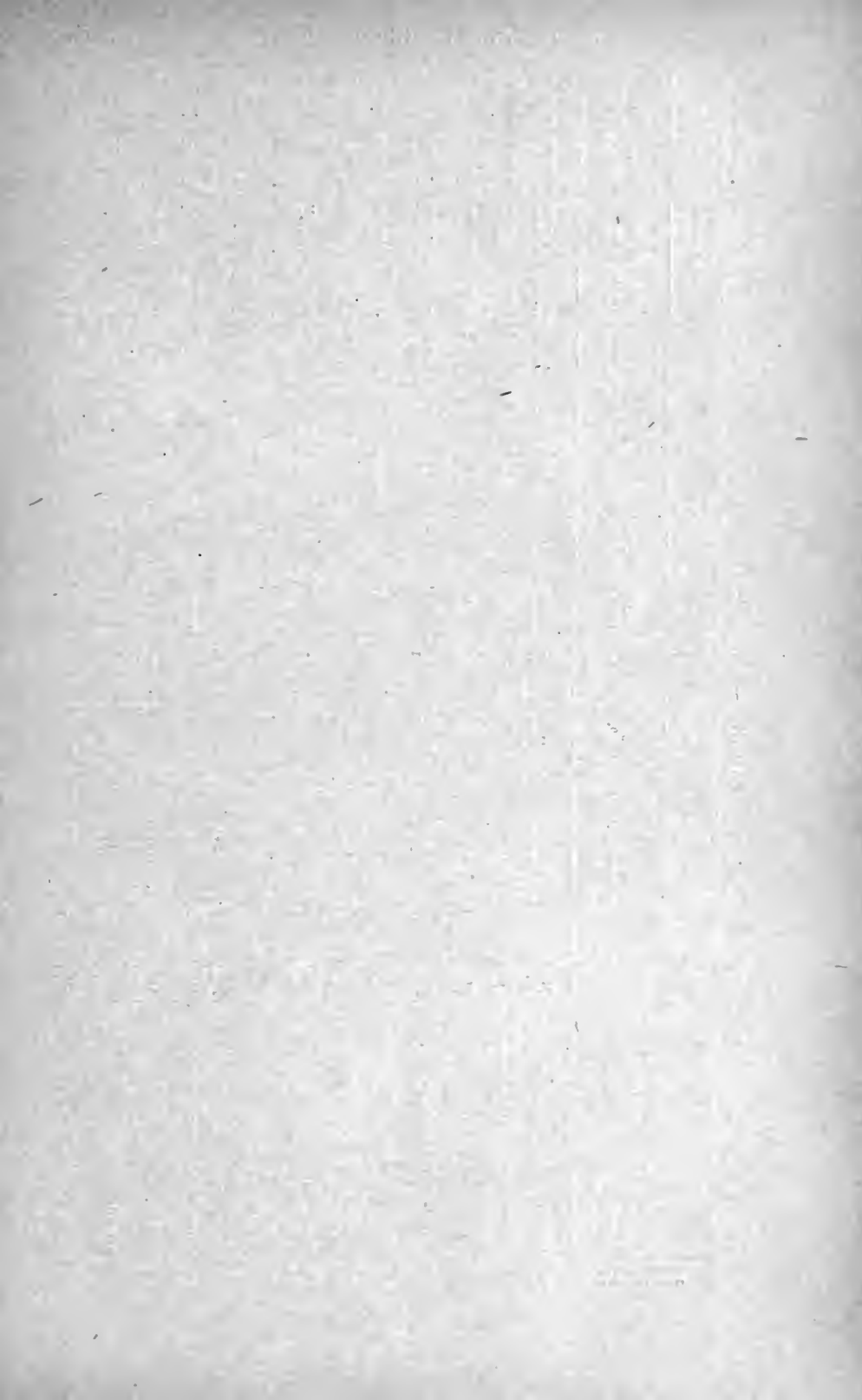
International Classification.	Cause of Death.	Age.													
		All ages.	Under 1	1	2	3	4	Under 5	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.
	V. DISEASES OF THE DIGESTIVE SYSTEM.	14,971	7,279	1,505	290	157	113	9,314	279	166	185	209	282	268	321
	Males,	8,110	4,052	832	167	83	69	5,203	147	92	101	106	123	139	182
	Females,	6,861	3,227	673	123	74	44	4,141	132	74	84	103	124	129	139
99	Diseases of the mouth and annexa {M., F.,	48 36	17 16	4 3	3 3	1 1	2 1	24 23	2 1	1 1	1 1	3 1	3 1	2 3	2 2
100	Diseases of the pharynx, {M., F.,	83 70	12 9	4 3	2 3	3 2	6 2	27 19	8 12	5 9	3 2	8 4	8 2	3 3	3 2
101	Diseases of the oesophagus, {M., F.,	10 11	1 1	1 1	1 1	1 1	1 1	1 4	1 1	1 1	1 1	1 1	1 1	1 1	1 1
102	Ulcer of the stomach, {M., F.,	157 105	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
103	Other diseases of the stomach {M., (cancer excepted), {F.,	728 664	284 220	31 31	14 8	8 10	3 8	340 277	18 9	2 1	2 6	6 7	10 5	9 10	16 13
104	Diarrhoea and enteritis (under 2 {M., years), {F.,	4,369 3,499	3,607 2,888	762 611	.....	.....	.....	4,369 3,499	.....	.....	.....	.....	.....	.....	.....
105	Diarrhoea and enteritis (2 years {M., and over), {F.,	682 359	.....	.....	138 92	54 43	87 23	929 163	57 56	13 11	9 10	4 11	8 7	13 14	19 12
106	Ankylostomiasis, {M., F., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
107	Intestinal parasites, {M., F.,	6 7	1 1	.....	2 2	1 1	2 2	6 6	.....	.....	.....	.....	.....	.....	.....
108	Appendicitis and typhlitis, {M., F.,	430 338	1 1	1 1	2 2	8 2	7 2	19 5	31 29	50 39	58 47	45 34	40 40	37 27	31 33

109	Hernia, Intestinal obstruction (total).	{ M., F. }	89 56	19 13	6 9	5 4	2 2	121 83	13 10	5 4	15 4	12 13	21 20	17 22
109a	Hernia,	{ M., F. }	20 160	3 9	1 9	.....	.....	24 9	1	1	3	2	8 3	5 4
109b	Intestinal obstruction,	{ M., F. }	300 314	16 13	5 9	5 4	2 2	97 74	12 10	4 4	12 4	10 13	13 17	12 13
110	Other diseases of the intestines,	{ M., F. }	77 11	3 3	.....	1 1	.....	12 13	1	1	4 5	4 4	5 2	5 1
111	Acute yellow atrophy of the liver,	{ M., F. }	20 17	1	1 .....	.....	.....	2 .....	.....	1	1 .....	.....	2.....	.....
112	Hydatid tumor of the liver,	{ M., F. }	2 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
113	Cirrhosis of the liver,	{ M., F. }	695 355	1	1	1	1 1	3 3	4	2 4	2 2	9 5	28 11	42 9
114	Biliary calculi,	{ M., F. }	57 161	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
115	Other diseases of the liver,	{ M., F. }	169 232	2 13	.....	1 1	4 1	22 20	4 3	3 1	1 4	6 4	8 9	11 16
116	Diseases of the spleen,	{ M., F. }	14 9	.....	.....	.....	.....	.....	.....	1.....	.....	.....	.....	.....
117	Simple peritonitis (nonpuerperal),	{ M., F. }	119 158	5 2	2 3	.....	3 2	27 18	9 10	8 3	7 3	10 22	4 13	5 13
118	Other diseases of the digestive system (cancer and tuberculosis excepted).	{ M., F. }	28 31	.....	.....	.....	1	3 .....	.....	1 1	1 1	2 1	2 1	2 3
VI. NONVENEREAL DISEASES OF THE GENITOURINARY SYSTEM AND ANNEA.			9,475	50	31	27	29	251	35	72	99	165	317	426
Males,			5,125	80	21	19	14	168	40	31	35	62	133	185
Females,			4,350	20	10	8	15	83	45	41	64	103	184	241
119	Acute nephritis,	{ M., F. }	420 394	13 11	11 5	6	10	81 48	30 28	10 16	12 22	15 23	18 19	24 21
120	Bright's disease,	{ M., F. }	4,097 3,363	14 9	9 5	7 2	2 3	55 29	30 17	20 20	22 26	58 55	107 114	149 110

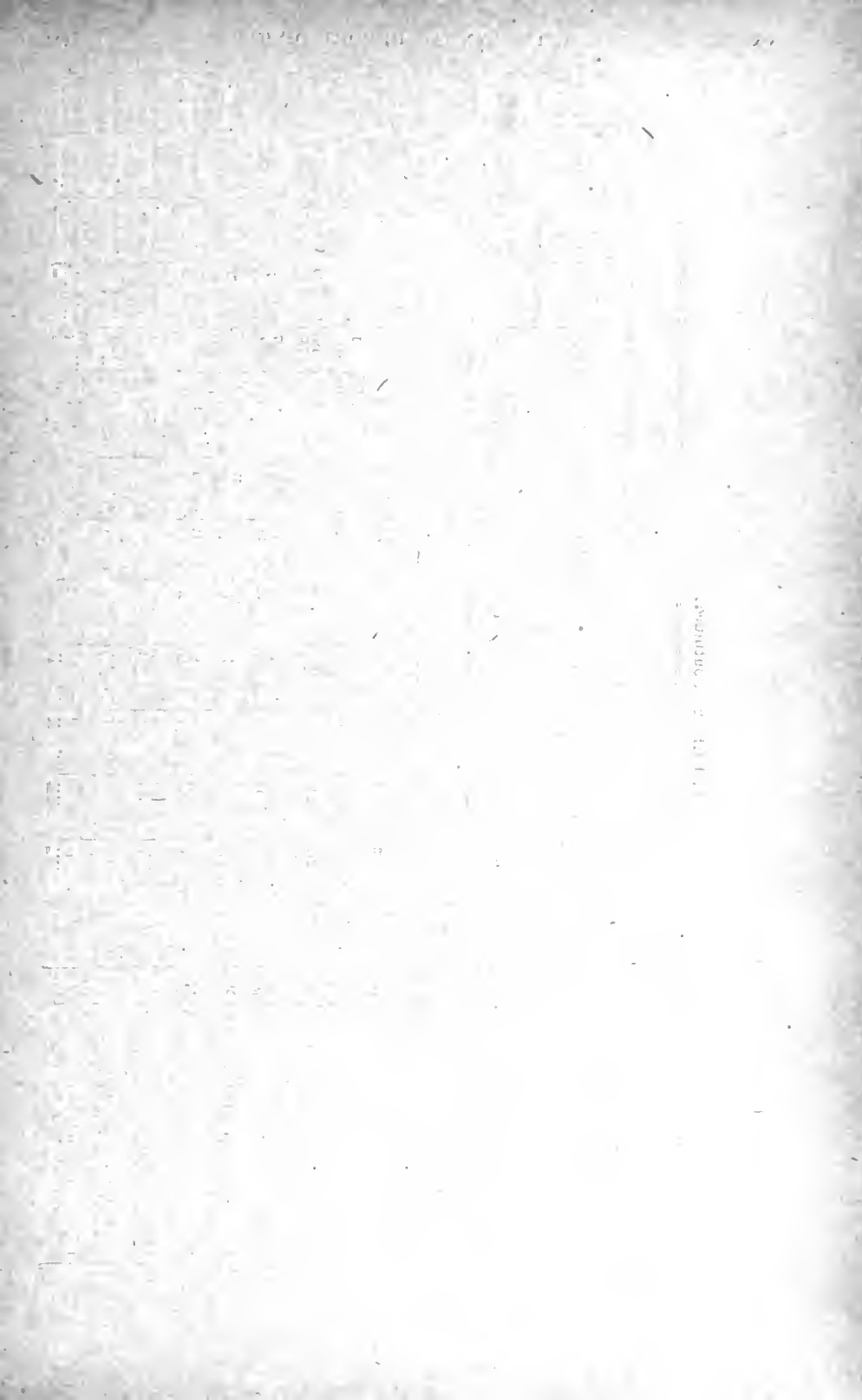


TABLE 2—Continued.

Intermittent Classification.	Cause of Death.	Age.													
		All ages.	Under 1	1	2	3	4	Under 5	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.
147	Diseases of the joints (tuberculosis and rheumatism excepted). {M., F.}	8 10	2 1	1	1	1	1	2 2	1	1	1	1	2	1	
148	Amputations, {M., F.}														
149	Other diseases of the organs of locomotion. {M., F.}	9 6		1		1		3					1	1	
X. MALFORMATIONS,		1,808	1,721	33	14	8	6	1,782	12	8	3	1	1		
	Males,	1,053	1,005	15	5	5	4	1,035	7	6	3	1	1		
	Females,	755	715	18	9	3	2	747	5	2					
150	Congenital malformations (still-births not included.) (Total.) {M., F.}	1,053 755	1,006 715	15 18	5 9	5 3	4 2	1,035 747	7 5	6 2	3	1	1		
150a	Hydrocephalus, {M., F.}	61 57	49 42	5 6	1 3	1 2	1	57 54	2 2	1	2				
150b	Congenital malformations of the heart. {M., F.}	728 476	700 451	7 5	4 4	3	2	717 472	4 2	5 1	1	1			
150c	Other congenital malformations, {M., F.}	264 222	257 212	3 6	2	1		251 221	1 1	1		1			
XI. EARLY INFANCY,		7,761	7,761					7,761							
	Males,	4,439	4,439					4,439							
	Females,	3,322	3,322					3,322							



39	Cancer and other malignant tumors (total).	{M., F.,}	102 297	189 357	263 422	291 469	335 451	332 429	284 372	184 277	29 69	82 136	10 15	2 3	1 1	2 1
	Of the buccal cavity,	{M., F.,}	9 3	18 1	20 2	25 4	42 8	34 8	29 10	20 13	6 2	14 2	1 1	1 1	1 1	2 1
40	Of the stomach, liver,	{M., F.,}	47 74	92 107	154 116	152 163	162 175	180 189	121 163	86 129	7 19	25 50	2 6	2 2	1 2	1 2
41	Of the peritoneum, intestines, rectum,	{M., F.,}	15 29	28 29	22 52	43 55	43 44	46 53	37 51	24 38	1 6	7 23	1 3	1 3	1 1	1 1
42	Of the female genital organs,	{M., F.,}	118	117	137	120	110	82	56	26	10	19	2	2	1	1
43	Of the breast,	{M., F.,}	51	74	84	95	86	64	1	37	15	21	2	2	1	1
44	Of the skin,	{M., F.,}	2 4	5 2	9 4	14 3	14 5	24 8	26 9	14 11	30 13	14 12	5 1	1 1	1 1	1 1
45	Of other organs or of organs not specified.	{M., F.,}	29 18	45 27	58 21	55 28	73 23	65 34	70 33	40 23	5 4	21 9	1 4	1 1	1 1	1 1
46	Other tumors (tumors of the female genital organs excepted.)	{M., F.,}	1	.....	3	4	3	1	1	1	.....	2	.....	.....	.....	.....
47	Acute articular rheumatism,	{M., F.,}	18 12	12 14	7 16	9 11	14 10	5 20	10 14	9 11	3 5	3 5	1 2	.....	.....	.....
48	Chronic rheumatism and gout,	{M., F.,}	2	.....	6	2	1	3	6	3	.....	2	.....	.....	.....	.....
49	Scurvy,	{M., F.,}	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
50	Diabetes,	{M., F.,}	30 20	41 40	33 77	57 90	58 120	68 110	40 94	32 32	6 5	15 15	.....	.....	.....	.....
51	Exophthalmic goitre,	{M., F.,}	8	1	.....	4	8	1	2	2	.....	.....	.....	.....	.....	.....
52	Addison's disease,	{M., F.,}	3 1	2 3	1	1 1	1 2	.....	.....	.....	1	.....	.....	.....	.....	.....
53	Leuchæmia,	{M., F.,}	6 6	11 5	5 2	4 5	3 6	4 6	3 2	1 3	.....	.....	.....	.....	.....	.....
54	Anæmia, chlorosis,	{M., F.,}	11 9	15 15	19 12	22 21	16 21	14 17	10 10	1 1	2 5	2 1	.....	.....	.....	.....
55	Other general diseases,	{M., F.,}	2 4	1 2	1 2	1 3	4 2	2 3	2 1	3 1	.....	2 6	2 1	2 1	2 1	2 1



IV. DISEASES OF THE RESPIRATORY SYSTEM.		496	561	663	677	733	794	800	685	515	266	109	24	4	6
	Males,	335	390	435	417	399	401	367	375	192	93	39	14	1	2
	Females,	161	171	218	260	340	393	433	410	323	173	70	10	3	4
86	Diseases of the nasal fossae,	{M., F.,													
87	Diseases of the larynx,	{M., F.,	1	4	2	1	1	1	1	1	1	1			
88	Diseases of the thyroid body, ..	{M., F.,	1	5	3	1	1	2	1	1					
89	Acute bronchitis,	{M., F.,	3	4	3	3	10	15	50	11	7	4	2		1
			3	1	1	7	16	18	30	25	12	6	2		
90	Chronic bronchitis,	{M., F.,	4	10	19	19	29	37	25	34	12	8	4		
			8	6	10	14	39	40	75	42	35	12	4		
91	Bronchopneumonia,	{M., F.,	50	47	67	74	77	96	58	42	23	10	3		2
			24	23	37	57	93	106	102	87	45	19		2	1
92	Pneumonia (total),	{M., F.,	248	272	281	254	211	163	131	79	33	11	3		2
			106	120	137	158	206	223	165	124	62	20	3	1	
92a	Lobar pneumonia,	{M., F.,	197	204	211	193	142	97	70	43	10	2	2		1
			82	85	95	109	122	131	86	57	23	13	2		
92b	Pneumonia (undefined),	{M., F.,	51	68	70	61	68	66	61	36	23	9	1		1
			23	35	42	49	65	79	92	67	39	7	1		
93	Pleurisy,	{M., F.,	7	13	13	18	11	14	9	5	3				
			9	4	11	8	15	8	11	8	7	1			
94	Pulmonary congestion, pulmonary apoplexy,	{M., F.,	4	12	7	13	7	7	13	12	5	5	2		1
			3	5	4	6	6	7	19	14	10	11	1		
95	Gangrene of the lung,	{M., F.,	1	1	3	3	2	1	1	1					
			2	1											
96	Asthma,	{M., F.,	3	15	16	17	21	22	15	4	8				
			4	4	12	8	11	11	10	12	8				
97	Pulmonary emphysema,	{M., F.,	1	1	1	1	2	1	3	1	1				
98	Other diseases of the respiratory system (tuberculosis excepted), ..	{M., F.,	12	12	24	13	17	11	5	2					
			2	2	3	3	3	2	3	4					

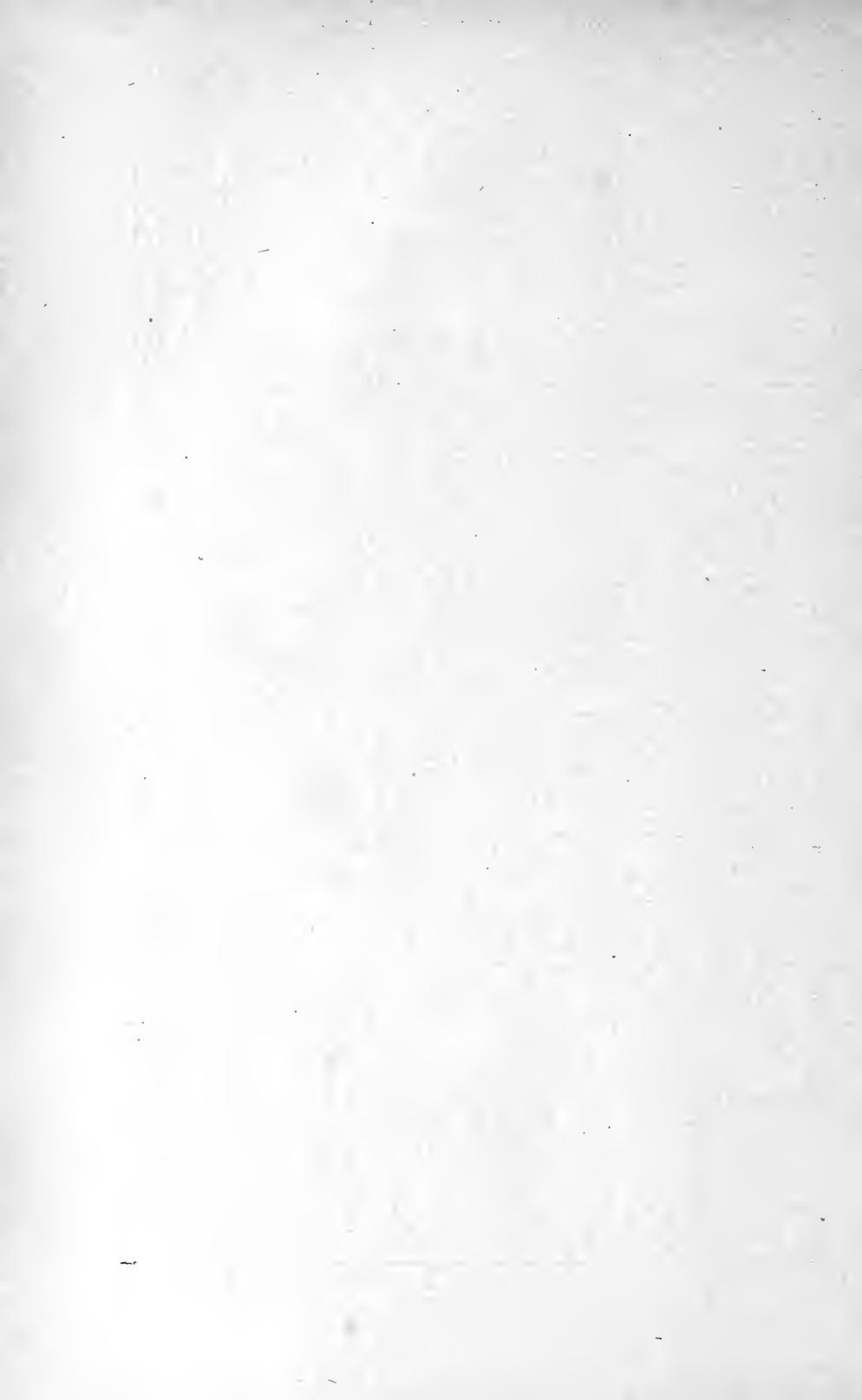


TABLE 2—Continued.

International Classification.	Cause of Death.	Age.											100 and over.	Un- known.				
		40 to 44.	45 to 49.	50 to 54.	55 to 59.	60 to 64.	65 to 69.	70 to 74.	75 to 79.	80 to 84.	85 to 89.	90 to 94.			95 to 99.			
180	Lightning, { M., { F.,	1		2	2													
181	Electricity (lightning excepted) { M., { F.,	2	7	1	1	1												
185	Fractures (cause not specified), { M., { F.,	1		1	1	1	1											
186	Other external violence, { M., { F.,	19	25	14	13	14	11	7	3	1	1							
	Homicide (total), { M., { F.,	24	17	11	6	6	2	1	1									1
182	By firearms, { M., { F.,	15	12	6	3	2	1		1									1
183	By cutting or piercing instru- { M., { F., ments.	2	1	3														
184	By other means, { M., { F.,	7	4	2	3	4	1											
	XIV. ILL DEFINED DISEASES,	25	23	33	41	40	41	52	52	39	17	8	1					
	Males,	14	12	29	27	24	22	28	29	13	4	6						
	Females,	11	11	9	14	16	19	24	23	23	13	2	1					
187	Ill-defined organic diseases, { M., { F.,	1	2	3	4	2	2	7	6	4	1							

MORTALITY TABLE 3.

Deaths in the Entire State and in Each Municipality Having More Than 10,000 Population, and for the Rural Section of Each County Including all Municipalities Having Less Than 10,000 Population, by Age Periods, and in Certain Municipalities by Color. (Still-births Excluded.)

Registration Area.	Age.												
	Under 1	1	2	3	4	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39
Entire State,	114,822	4,775	2,014	1,345	928	31,208	2,737	1,651	2,569	3,704	4,086	4,124	4,726
Total cities (of 10,000 population),	60,578	2,514	1,048	712	504	17,297	1,459	870	1,331	2,102	2,270	2,473	2,835
Total rural (including municipalities under 10,000),	54,254	2,261	966	633	424	16,911	1,278	804	1,178	1,602	1,716	1,651	1,891
Cities.													
Allentown,	907	41	14	14	13	265	25	7	24	24	47	26	43
Altoona,	811	36	20	7	4	254	30	12	21	27	53	46	29
Beaver Falls,	188	8	3	1	1	49	8	4	6	7	8	5	8
Ethlehem,	165	9	4	1	.....	49	3	1	3	1	4	3	3
Bradock,	366	28	15	1	.....	152	13	7	10	13	28	16	17
Bradford,	294	34	3	.....	.....	40	.....	2	4	8	10	9	10
Futler,	294	65	6	1	.....	87	9	9	8	7	13	16	12
Carbondale,	292	8	2	2	.....	83	7	5	4	11	11	13	18
Carlisle (total),	153	11	3	1	.....	19	2	2	6	2	5	6	6
White,	122	9	.....	.....	.....	10	1	1	.....	.....	.....	.....	.....
Colored,	31	2	3	1	.....	9	1	1	4	.....	.....	.....	.....
Carnegie,	115	6	3	1	.....	53	5	3	2	2	4	1	5
Chambersburg,	213	35	3	4	.....	47	4	8	4	6	3	5	5
Chester (total),	693	163	6	8	.....	217	8	7	23	23	32	25	22
White,	566	131	4	8	.....	176	7	5	19	15	23	15	13
Colored,	127	32	2	.....	.....	41	1	2	4	8	9	10	9

Coatesville (total),	131	42	5	4	1	2	51	3	.....	3	1	6	5	4
White,	118	38	5	3	1	2	49	3	.....	2	1	4	5	4
Colored,	13	4	.....	1	.....	.....	6	.....	.....	1	.....	.....	.....	.....
Columbia,	160	26	6	4	3	1	40	2	.....	4	4	7	3	5
Connellyville,	185	35	7	3	.....	.....	48	5	.....	6	.....	.....	.....	.....
DuBois,	145	30	8	.....	1	.....	89	1	.....	4	9	5	5	11
Dunmore,	333	140	92	7	3	.....	116	2	.....	7	.....	.....	.....	.....
Duquesne,	213	92	20	.....	.....	.....	119	6	.....	4	6	7	8	14
Easton,	608	20	5	10	7	.....	102	21	.....	13	13	28	22	23
Erie,	1,057	247	35	13	11	.....	314	10	.....	14	20	33	35	42
Farrell,	155	73	10	.....	2	.....	89	9	.....	6	9	7	4	6
Greensburg,	235	33	10	.....	.....	.....	55	5	.....	9	11	19	15	20
Harrisburg,	937	135	20	7	.....	.....	181	23	.....	29	35	38	38	57
Hazleton,	424	138	16	8	12	.....	140	16	.....	21	23	17	20	17
Homestead,	259	106	23	6	7	.....	142	13	.....	1	7	9	9	7
Johnstown,	949	280	50	20	20	.....	389	37	.....	21	43	49	39	53
Lancaster,	403	108	20	7	.....	.....	142	14	.....	15	20	21	21	33
Lebanon,	318	59	10	1	5	.....	76	6	.....	5	13	10	12	16
McKees Rocks,	185	89	13	5	5	.....	111	5	.....	5	6	6	7	10
McKeesport,	640	184	38	10	9	.....	250	10	.....	20	29	37	32	39
Mahanoy City,	187	53	14	3	2	.....	74	8	.....	2	10	8	5	6
Meadville,	198	31	4	3	2	.....	41	1	.....	8	7	4	6	4
Monessen,	184	92	22	5	1	.....	120	9	.....	3	8	2	5	7
Mount Carmel,	212	77	15	7	.....	.....	106	12	.....	3	4	9	5	6
Nanticoke,	321	54	25	13	2	.....	137	18	.....	6	13	16	12	20
New Castle,	464	122	21	6	7	.....	100	9	.....	16	20	10	21	21
Norristown,	643	68	12	5	6	.....	95	9	.....	14	13	27	19	34
North Braddock,	135	51	7	6	4	.....	69	6	.....	4	4	5	10	1
Oil City,	248	47	8	1	2	.....	58	4	.....	6	8	10	9	14
Old Forge,	199	76	30	7	2	.....	117	3	.....	4	3	8	11	6
Philadelphia (total),	26,739	4,370	1,091	444	286	197	6,798	539	301	506	843	938	1,087	1,221
White,	24,451	4,420	902	403	262	180	6,168	500	267	438	739	802	913	1,055
Colored,	2,285	450	98	41	24	17	630	39	34	68	104	135	174	162
Phoenixville,	183	41	6	3	2	2	57	6	.....	5	2	6	8	3
Pittsburgh (total),	9,857	1,868	399	167	120	96	2,650	282	157	184	362	386	389	502
White,	8,264	1,763	377	157	124	90	2,511	288	138	162	334	358	359	449
Colored,	593	105	22	10	5	6	148	25	19	22	28	28	30	53
Pittston,	347	89	30	8	1	6	134	11	8	7	17	10	16	17
Plymouth,	269	79	17	4	2	6	107	7	1	4	2	6	7	3

TABLE 3—Continued.

Registration Area.	Age.													
	All Ages.	Under 1	1	2	3	4	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39
Pottstown,	224	30	3	6	3	3	41	6	5	3	10	9	9	7
Pottsville,	353	68	2	2	2	3	68	9	4	3	19	25	22	17
Reading,	1,453	271	56	29	19	6	389	28	23	40	67	45	62	60
Scranton,	2,231	560	114	43	27	19	17	52	35	65	98	89	96	109
Shamokin,	239	61	7	3	2	3	76	12	1	3	5	8	8	8
Sharon,	207	45	6	3	.....	1	55	6	6	4	10	12	10	12
Shenandoah,	460	194	44	17	11	1	267	10	2	2	13	14	12	16
South Bethlehem (Northampton),	236	116	19	8	1	3	147	4	3	7	10	10	12	14
Steelton,	170	65	10	4	2	.....	81	7	1	.....	7	7	7	8
Sunbury,	165	24	6	4	2	2	33	10	1	6	3	9	6	5
Uniontown (Fayette),	276	45	10	4	3	1	63	4	3	12	13	24	20	15
Warren,	161	20	7	1	3	2	98	5	.....	4	13	8	7	15
Washington,	303	53	8	4	3	3	76	10	.....	4	12	14	13	15
West Chester (total),	233	40	9	4	4	1	53	1	6	8	11	6	7	13
White,	212	22	4	4	2	1	33	.....	3	4	9	4	4	9
Colored,	71	13	5	.....	2	.....	25	1	3	4	2	2	3	4
Wilkes-Barre,	1,131	242	60	29	17	13	351	41	30	30	44	48	47	61
Wilkesburg,	298	42	10	5	3	4	64	6	6	5	11	13	19	16
Williamsport,	541	85	18	1	8	4	117	7	7	13	18	25	23	23
York,	676	90	11	9	7	2	119	21	11	24	29	28	20	33
Counties (Rural, exclusive of municipalities of 10,000 or over),														
Adams,	424	61	16	5	1	4	87	8	4	8	11	6	6	14
Allegheny,	4,795	1,241	220	84	67	37	1,639	112	67	91	196	184	245	245
Armstrong,	825	235	42	14	10	10	312	23	15	23	21	20	20	26
Beaver,	1,020	305	59	18	10	6	398	27	10	25	31	41	26	37
Bedford,	426	94	7	6	3	1	111	12	10	7	14	14	7	8

Berks,	1,286	537	21	11	12	10	291	28	20	44	23	36
Blair,	780	153	27	15	3	8	236	9	9	26	30	58
Breadford,	902	94	14	13	7	4	132	8	8	22	25	30
Bucks,	1,059	155	20	13	6	6	202	7	7	27	23	25
Butler,	522	88	19	8	2	4	121	9	13	12	19	21
Cambla,	1,546	570	115	42	24	16	767	62	33	47	63	51
Cameron,	65	17	.....	.....	.....	.....	17	2	2	1	3	1
Carlton,	829	243	46	14	14	9	325	17	7	19	37	30
Carroll,	1,032	12	8	8	8	6	17	14	14	8	21	20
Centre,	550	133	27	15	6	6	204	22	19	29	28	35
Chester,	1,042	150	27	15	6	6	204	22	19	29	28	35
Clarion,	398	72	18	6	5	2	103	6	13	13	18	8
Clearfield,	845	252	39	25	10	2	335	17	15	24	24	24
Clellon,	403	68	6	3	1	3	81	8	8	11	7	18
Columbia,	574	103	20	9	7	6	145	24	12	10	33	19
Crawford,	670	65	12	8	3	2	90	8	9	12	15	14
Cumberland,	581	96	8	6	5	2	117	8	11	7	18	19
Dauphin,	871	162	18	13	6	6	295	10	14	15	22	23
Delaware,	1,033	174	24	16	10	5	228	17	15	26	30	33
Elk,	353	59	4	6	1	1	131	8	8	16	8	4
Essex,	704	77	7	9	3	3	99	10	8	10	16	29
Fayette,	1,897	715	127	51	24	21	938	56	36	67	66	70
Forest,	75	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Franklin,	768	85	22	4	3	2	116	12	5	4	43	43
Fulton,	116	13	7	1	1	.....	18	1	2	6	3	7
Greene,	279	48	7	6	5	.....	66	8	5	6	6	6
Huntingdon,	477	100	14	8	2	2	126	8	4	17	17	14
Indiana,	886	276	63	19	12	7	377	29	9	18	24	25
Jefferson,	673	148	23	17	12	11	211	16	15	6	21	19
Juniata,	203	30	9	3	3	.....	36	7	7	6	3	5
Lackawanna,	1,490	462	100	40	13	12	627	30	18	34	61	73
Lancaster,	1,319	190	34	12	8	6	250	18	10	25	22	30
Lawrence,	421	113	16	9	12	2	152	8	7	10	16	12
Lebanon,	503	104	13	5	5	3	130	6	6	9	13	12
Lehigh,	1,104	299	34	12	5	6	265	27	13	24	38	35
Luzerne,	3,197	1,000	240	101	63	66	1,460	109	52	69	109	101
Lycoming,	521	71	10	6	4	4	95	7	10	12	15	15
McKean,	383	72	7	6	4	4	92	8	7	12	8	22
Mercer,	681	17	7	7	6	5	129	19	8	18	16	16
Mifflin,	339	71	11	2	3	4	61	6	11	11	13	12
Monroe,	279	42	3	3	2	1	61	4	2	5	4	10
Montgomery,	1,657	275	51	18	15	3	362	35	20	56	61	58
Montour,	275	32	5	2	.....	.....	41	.....	.....	.....	7	15
Northampton,	933	240	41	16	12	5	314	17	17	35	33	30
Northumberland,	870	246	23	15	7	8	279	17	17	24	28	30
Perry,	269	39	7	1	1	3	61	4	4	3	3	11

TABLE 3—Continued.

Registration Area.	Age.													
	All Ages.	Under 1	1	2	3	4	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39
Pike	112	9	1		2			2	2	4			2	5
Potter	259	38	6		3		12	7	8	1	1	4	7	4
Sawkill	2,225	590	100	45	52	24	818	70	38	42	73	81	73	86
Soyer	1,196	24	4	4	2	3	37	8	8	5	3	4	8	4
Somerset	987	300	66	29	16	6	417	32	9	21	28	24	29	24
Sullivan	97	25	4	3			32		1	1	5	3		
Susquehanna	556	82	12	6	8	1	108	12	7	12	11	13	10	21
Tioga	506	47	7	6	1	2	63	6	3	8	12	6	7	14
Union	179	20	1	1	1	2	25	1		2	3	6	4	2
Vanango	478	51	12	3	1	4	71	14	13	16	29	15	8	17
Warren	435	37	4	3			48	4	5	6	5	11	20	19
Washington	1,922	626	126	64	36	23	375	61	23	49	68	63	61	67
Wayne	387	40	12	2	2	2	68	4	7	3	12	12	10	11
Westmoreland	2,668	903	162	48	49	18	1,180	68	34	69	87	80	90	91
Wyoming	203	26	5	2		1	34	1	4	4	1	3	5	9
York	983	187	33	16	15	6	265	27	11	24	24	32	14	22

TABLE 3—Continued.

Registration Area.	Age.												Un-known	
	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 to 94	95 to 99		100 & over
Cambria,	50	61	45	45	47	44	39	33	33	11	6	.....	.....	1
Cameron,	8	2	1	4	4	5	7	5	4	4	2	.....	.....	.....
Carbon,	28	22	33	33	40	39	49	41	29	15	4	2	.....	.....
Centre,	16	9	20	31	35	48	49	47	34	16	4	1	.....	.....
Chester,	27	37	51	45	66	86	115	98	77	30	12	1	.....	1
Clarion,	15	9	9	10	27	29	32	33	29	14	5	3	.....	.....
Clearfield,	19	31	36	36	44	48	70	36	26	10	5	2	.....	.....
Clinton,	14	12	17	23	29	33	51	27	27	11	3	1	.....	.....
Columbia,	18	23	22	26	34	50	42	48	32	9	11	5	.....	.....
Crawford,	14	27	26	48	52	64	73	81	60	29	7	1	.....	1
Cumberland,	18	20	24	30	39	54	57	51	56	18	3	2	.....	.....
Dauphin,	24	39	42	45	59	63	69	58	47	22	6	.....	.....	.....
Delaware,	34	40	64	54	86	95	81	73	58	31	11	5	.....	1
Elk,	14	22	14	15	17	13	20	20	22	7	1	.....	.....	.....
Erie,	26	15	48	41	45	53	75	93	59	25	7	1	.....	1
Fayette,	71	48	44	64	65	80	66	53	41	53	7	2	.....	.....
Forest,	21	2	9	9	1	13	6	7	4	1	.....	.....	.....	.....
Franklin,	51	36	34	34	44	46	50	75	53	16	3	.....	.....	.....
Fulton,	4	3	8	8	8	12	14	15	15	12	1	.....	.....	.....
Greene,	4	4	13	13	17	25	25	19	25	11	1	.....	.....	.....
Huntington,	15	19	20	30	40	37	38	35	26	12	6	1	.....	.....
Indiana,	24	27	27	31	35	53	45	70	44	15	6	2	.....	.....
Jefferson,	23	28	37	33	33	46	55	39	24	22	3	2	.....	.....
Juniata,	6	2	4	7	15	23	14	21	23	10	1	.....	.....	.....
Lackawanna,	65	75	82	52	68	56	50	53	32	12	9	.....	.....	1
Lancaster,	32	36	52	67	94	112	157	154	116	66	23	1	.....	1
Lawrence,	23	6	15	18	23	24	23	39	20	7	3	.....	.....	.....
Lebanon,	14	15	25	27	34	47	53	45	32	12	7	.....	.....	.....
Lehigh,	46	41	44	65	71	82	77	84	62	27	12	2	.....	.....
Luzerne,	112	138	141	115	131	133	127	106	59	27	3	.....	.....	1

Lycoming,	21	26	30	31	59	60	45	37	15	6	1	.....	.....
McKeon,	13	16	19	32	22	43	27	17	5	1	.....	.....	.....
Mercer,	24	28	34	62	63	72	62	40	15	7	1	.....	.....
Mifflin,	7	13	13	26	34	28	17	15	7	.....	1	.....	.....
Monroe,	8	9	26	14	32	20	.....	55	11	3	.....	.....	.....
Montgomery,	49	73	95	122	145	142	104	107	49	17	3	.....	.....
Montour,	16	13	17	31	24	29	23	23	8	7	1	.....	.....
Northampton,	27	33	37	47	57	51	45	40	26	4	1	.....	.....
Northumberland,	40	42	42	36	50	58	42	46	27	6	1	.....	.....
Perry,	1	13	18	16	31	39	28	22	6	2	1	.....	.....
Pike,	6	2	11	5	13	10	11	6	6	1	.....	.....	.....
Potter,	8	11	17	19	28	29	22	12	9	4	.....	.....	.....
Schuyler,	95	103	104	114	116	109	96	68	38	8	2	.....	.....
Snyder,	6	6	6	19	17	31	30	14	6	3	.....	.....	.....
Somerset,	25	31	41	37	51	41	41	26	24	5	.....	.....	.....
Sullivan,	3	7	7	5	5	10	4	6	5	1	.....	.....	.....
Susquehanna,	21	15	14	27	61	58	54	36	23	11	.....	.....	.....
Tioga,	16	28	26	46	56	63	63	43	27	5	1	.....	.....
Union,	6	9	13	20	17	17	23	17	9	2	.....	.....	.....
Venango,	11	17	24	36	40	42	47	34	19	5	1	.....	.....
Warren,	18	24	23	39	44	52	34	40	17	6	2	.....	.....
Washington,	60	67	51	66	79	88	77	50	23	14	3	.....	.....
Wayne,	17	11	13	28	21	84	43	28	21	5	1	.....	.....
Westmoreland,	88	88	102	119	120	123	106	83	43	14	4	.....	.....
Wyoming,	7	4	16	12	22	18	20	14	8	1	.....	.....	.....
York,	24	41	49	48	76	98	100	62	29	7	1	.....	.....

MORTALITY TABLE 4.

Deaths in the Entire State and in Each Municipality Having More Than 10,000 Population and for the Rural Sections of Each County, Including all Municipalities Having Less Than 10,000 Population, from Certain Specified Causes, and for Certain Cities by Color. (Stillbirths Excluded.)

Registration Area.	Cause of Death.																
	All causes.*	Typhoid fever.	Malaria.	Smallpox.	Measles.	Scarlet fever.	Whooping cough.	Diphtheria and croup.	Influenza.	Dyspepsia.	Tuberculosis of the lungs†	Tuberculous meningitis.	Other forms of tuberculosis.	Rheumatism.	Cancer‡	Diabetes.	Meningitis.
Entire State,	114,882	1,071	20	4	549	880	939	1,925	760	349	8,841	557	814	532	5,997	1,206	668
Total cities (10,000 population and over),	60,578	532	13	2	279	466	487	966	335	188	4,933	377	455	282	3,245	666	321
Total rural (inclusive of municipalities under 10,000),	54,254	539	7	2	270	304	452	959	425	161	3,908	180	359	290	2,752	540	385
Cities (of 10,000 population).																	
Allentown,	907	20	.....	.....	19	8	2	28	9	8	62	6	7	4	59	11	7
Altoona,	811	17	.....	.....	20	8	9	13	1	2	44	10	6	2	44	10	6
Beaver Falls,	188	3	.....	.....	1	2	.....	4	4	.....	15	3	3	.....	11	.....	2
Bethlehem,	165	2	.....	.....	2	.....	.....	1	.....	.....	7	.....	.....	.....	8	.....	.....
Braddock,	366	3	.....	.....	2	7	2	4	1	1	16	3	5	2	6	4	5
Bradford,	224	.....	.....	.....	2	.....	3	1	2	.....	12	.....	.....	.....	9	5	2
Butler,	294	3	.....	.....	.....	.....	8	8	2	1	15	2	.....	1	21	3	.....
Carbondale,	292	2	.....	.....	.....	.....	4	5	9	.....	13	.....	1	.....	13	2	.....
Carlisle (total),	163	.....	.....	.....	.....	.....	5	.....	.....	.....	16	2	3	.....	10	1	1
White,	122	.....	.....	.....	.....	.....	2	.....	2	.....	11	.....	2	.....	8	1	1
Colored,	81	.....	.....	.....	.....	.....	3	.....	.....	.....	5	2	1	.....	2	.....	.....
Carnegie,	115	3	.....	.....	.....	1	1	1	2	.....	4	2	.....	1	2	.....	2
Chambersburg,	233	5	.....	.....	.....	5	4	2	.....	2	6	1	2	2	16	2	.....
Chester, (total),	683	6	.....	.....	.....	1	8	5	5	.....	79	4	10	4	25	8	4
White,	566	6	.....	.....	.....	1	8	5	5	.....	56	3	10	2	22	8	3
Colored,	127	.....	.....	.....	.....	.....	.....	.....	.....	.....	23	1	.....	2	3	.....	1

TABLE 4—Continued.

	Cause of Death.																
	All causes.*	Typhoid fever.	Malaria.	Smallpox.	Measles.	Scarlet fever.	Whooping cough.	Diphtheria and croup.	Influenza.	Dyspepsia.	Tuberculosis of the lungs.†	Tuberculous meningitis.	Other forms of tuberculosis.	Rheumatism.	Cancer.‡	Diabetes.	Meningitis.
Pottstown,	324	4	.....	.....	.....	1	1	7	.....	.....	20	.....	2	.....	15	5	1
Pottsville,	363	8	1	.....	.....	1	13	32	3	.....	28	.....	1	1	18	3	2
Reading,	1,452	33	.....	.....	.....	6	13	32	6	.....	116	.....	6	4	86	19	17
Scranton,	2,231	13	.....	.....	10	4	21	32	7	.....	108	.....	16	14	85	28	10
Shamokin,	239	1	.....	.....	.....	8	.....	10	3	.....	17	.....	.....	.....	14	1	.....
Sharon,	207	4	.....	.....	.....	.....	3	6	1	.....	16	.....	2	.....	10	1	2
South Bethel,	460	.....	.....	.....	.....	4	1	21	2	.....	20	.....	1	3	6	1	2
South Bethlehem (Northampton),	286	1	.....	.....	3	4	.....	4	.....	.....	21	.....	4	1	7	1	1
Steakton,	170	.....	.....	.....	1	1	.....	.....	1	.....	15	.....	.....	.....	.....	.....	.....
Sunbury,	165	1	.....	.....	1	3	.....	6	.....	2	9	.....	.....	.....	14	4	2
Uniontown (Fayette),	276	10	.....	.....	1	1	.....	.....	1	.....	16	.....	1	2	18	2	6
Warren,	161	1	.....	.....	.....	1	.....	2	.....	.....	22	.....	1	.....	19	1	.....
Washington,	308	8	1	.....	6	.....	7	3	3	.....	32	.....	1	1	19	2	.....
West Chester (total),	233	13	.....	.....	.....	1	.....	3	2	.....	17	.....	.....	.....	15	3	1
White,	212	8	.....	.....	.....	1	.....	3	2	.....	14	.....	.....	.....	13	3	1
Colored,	71	6	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....
Wilkes-Barre,	1,131	5	1	.....	25	9	8	33	9	.....	49	.....	8	4	46	18	8
Wilkesburg,	298	7	.....	.....	.....	11	4	3	.....	.....	17	.....	4	1	22	3	3
Williamsport,	541	6	.....	.....	2	.....	3	3	5	.....	19	.....	4	2	50	8	4
York,	676	15	.....	.....	.....	.....	3	13	4	.....	66	.....	6	8	47	9	2
Counties (Rural, Exclusive of municipalities over 10,000).	424	1	.....	.....	13	61	5	4	4	.....	39	.....	4	2	36	5	1
Adams,	4,765	41	.....	.....	.....	.....	41	74	21	15	518	.....	16	22	223	33	33
Allegheny,	4,525	24	.....	.....	2	8	18	20	3	.....	43	.....	9	4	33	7	4
Armstrong,	1,020	13	.....	.....	1	13	6	21	9	2	69	.....	2	4	46	4	14
Beaver,	1,020	13	.....	.....	.....	.....	6	21	9	2	69	.....	2	4	46	4	14
Bedford,	426	6	.....	.....	.....	.....	4	2	.....	1	20	.....	3	1	21	2	2

Berks,	1,286	18	1	1	1	13	25	10	135	3	9	5	66	13	8
Baird,	480	12	2	5	1	2	8	1	44	1	2	7	44	6	5
Bradford,	492	16	2	5	1	2	14	14	49	2	7	7	68	12	.....
Breks,	1,072	16	12	3	3	3	16	5	32	5	4	4	76	13	.....
Bulver,	322	3	3	.....	.....	.....	9	.....	23	1	6	1	33	6	.....
Cambridge,	1,546	16	22	1	1	29	64	1	117	8	10	3	46	6	8
Camden,	85	1	1	.....	.....	1	1	.....	.....	.....	.....	.....	4	1	.....
Carlton,	829	5	8	4	6	6	23	10	53	.....	6	6	38	9	.....
Centre,	550	8	.....	.....	.....	1	10	4	18	2	6	6	31	8	1
Chesler,	1,042	11	4	.....	.....	.....	12	16	96	7	9	3	63	13	4
Clarion,	298	3	1	.....	.....	5	6	2	15	1	2	4	24	5	2
Cleaveland,	845	9	3	.....	.....	19	8	5	48	.....	3	6	50	7	6
Clyton,	403	5	.....	.....	.....	2	4	6	24	3	2	2	30	8	5
Columbia,	574	4	.....	.....	.....	7	15	4	21	.....	2	2	40	3	.....
Crawford,	670	6	.....	.....	.....	6	4	6	39	2	1	2	48	13	5
Cumberland,	581	4	.....	.....	.....	7	10	8	37	3	6	3	33	8	2
Dauphin,	871	5	.....	.....	.....	4	19	7	77	4	10	5	39	10	5
Delaware,	1,033	12	.....	.....	.....	4	6	13	80	7	9	4	74	13	3
Elk,	358	3	.....	.....	.....	2	5	6	20	2	.....	.....	21	.....	.....
Erle,	704	3	.....	.....	.....	1	10	18	33	3	1	.....	67	10	3
Fayette,	1,897	31	14	33	19	18	18	5	107	3	16	10	67	7	13
Forest,	75	.....	.....	.....	.....	.....	.....	1	3	.....	.....	.....	1	.....	.....
Franklin,	766	6	.....	.....	4	13	8	.....	283	3	10	1	31	4	4
Fulton,	116	1	.....	.....	1	1	1	.....	17	.....	.....	.....	1	.....	.....
Greene,	279	3	.....	.....	1	8	3	4	23	.....	2	4	18	9	2
Huntingdon,	477	7	.....	.....	2	3	5	.....	24	.....	2	3	30	6	.....
Indiana,	856	10	.....	.....	9	9	24	6	.....	1	5	5	31	12	5
Jefferson,	913	6	.....	.....	6	9	9	2	21	3	5	4	51	15	3
Juniata,	262	2	.....	.....	1	.....	9	1	13	.....	.....	.....	5	3	4
Lackawanna,	1,490	3	.....	.....	7	3	20	14	75	4	6	2	33	3	14
Lancaster,	1,319	20	.....	.....	4	4	15	8	69	5	10	.....	60	17	5
Lawrence,	423	5	.....	.....	3	2	3	.....	22	.....	2	.....	21	.....	.....
Lebanon,	503	6	.....	.....	2	2	9	.....	30	.....	.....	.....	15	.....	.....
Lehigh,	1,304	12	.....	.....	2	9	4	.....	100	2	1	.....	45	.....	.....
Lehigh,	3,197	9	40	33	23	23	93	13	184	8	16	21	99	11	12
Lycemng,	521	5	.....	.....	2	2	10	3	23	.....	3	6	35	6	.....
McKean,	483	5	.....	.....	2	1	2	.....	23	.....	1	1	10	4	.....
Mercer,	681	18	.....	.....	7	8	11	2	32	3	.....	.....	47	11	6
Mifflin,	339	2	.....	.....	1	2	15	.....	25	1	2	1	15	6	.....
Monroe,	279	1	.....	.....	1	4	4	3	24	.....	2	2	20	.....	.....
Montgomery,	1,657	22	.....	.....	4	8	18	22	189	7	13	12	95	16	9
Montour,	975	6	.....	.....	5	5	2	5	18	.....	6	6	17	4	.....
Northampton,	493	6	.....	.....	3	3	9	1	72	6	6	6	51	14	3
Northumberland,	870	8	.....	.....	1	5	19	3	54	2	3	.....	35	8	4
Perry,	269	1	.....	.....	.....	3	8	1	14	.....	.....	.....	17	.....	.....

TABLE 4—Continued.

	Cause of Death.																
	All causes.*	Typhoid fever.	Malaria.	Smallpox.	Measles.	Scarlet fever.	Whooping cough.	Diphtheria and croup.	Influenza.	Dysipelas.	Tuberculosis of the lungs.†	Tuberculous meningitis.	Other forms of tuberculosis.	Rheumatism.	Cancer.‡	Diabetes.	Meningitis.
Pike,	112	.....	.....	.....	2	.....	1	5	5	1	.....	.....	1	4	2	.....	.....
Potter,	259	.....	.....	.....	1	.....	5	5	5	.....	.....	.....	4	2	90	8	.....
Schuykill,	2,235	19	1	.....	6	30	11	71	13	8	133	7	7	14	89	18	13
Snyder,	196	1	.....	.....	.....	1	1	5	1	.....	9	1	.....	3	16	4	3
Somerset,	337	9	.....	.....	15	2	8	63	6	4	33	.....	3	2	32	10	4
Sullivan,	97	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	.....
Susquehanna,	556	5	.....	.....	9	1	.....	.....	.....	.....	.....	.....	.....	.....	23	5	4
Tioga,	506	4	.....	.....	.....	2	.....	1	7	2	21	.....	.....	.....	39	5	4
Union,	179	1	.....	.....	.....	.....	2	.....	1	.....	13	.....	.....	.....	17	3	1
Venango,	478	8	.....	.....	.....	5	4	2	1	.....	34	.....	.....	.....	34	13	4
Warren,	335	.....	.....	.....	.....	.....	.....	.....	.....	.....	21	.....	.....	.....	19	8	1
Washington,	1,322	19	.....	.....	23	50	34	27	6	4	95	.....	.....	.....	75	6	21
Wayne,	337	1	.....	.....	1	.....	2	7	4	.....	27	.....	.....	.....	23	7	.....
Westmoreland,	2,343	26	.....	.....	6	24	25	53	18	8	123	.....	.....	.....	110	21	28
Wyoming,	503	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	.....	15	8	.....
York,	383	13	1	.....	.....	.....	5	15	7	1	82	.....	.....	.....	64	10	4

*Exclusive of stillbirths.
 †Including "acute military tuberculosis."
 ‡Cancer and other malignant tumors.

TABLE 4—Continued.

Registration Area.	Cause of Death.																
	Cerebral haemorrhage and softening.	Organic diseases of the heart.	Bronchitis.	Pneumonia (all forms).	Other respiratory diseases.	Diarrhoea and enteritis (under 15 years).	Appendicitis.	Hernia, intestinal obstruction.	Cirrhosis of the liver.	Nephritis, Bright's disease.	Puerperal fever.	Other puerperal affections.	Congenital debility and malformations.	Violent deaths (excluding suicide).	Suicide.	Ill-defined and unknown.	All other causes.
Entire State,	6,325	11,355	1,644	12,033	1,474	7,868	768	969	1,051	8,272	673	773	8,192	8,012	1,005	854	13,339
Total cities (10,000 population and over)	2,819	6,159	977	6,733	803	4,183	579	579	588	5,004	413	419	3,904	3,865	581	222	9,138
Total rural (inclusive of municipalities under 10,000),	3,516	5,196	667	5,250	671	3,685	189	390	463	3,268	260	354	4,288	4,147	464	632	9,251
Cities (of 10,000 population).																	
Allentown,	96	80	5	70	8	43	11	4	9	53	13	7	75	50	12	16	114
Altoona,	36	75	9	88	11	45	8	6	9	60	8	11	71	71	32	3	145
Beaver Falls,	2	19	3	25	3	9	2	3	2	8	3	3	10	17	3	.....	32
Bethlehem,	17	17	1	21	1	11	.....	2	1	11	1	1	15	2	5	.....	32
Brad dock,	10	18	11	58	3	48	6	4	3	14	3	6	25	37	3	.....	56
Bradford,	10	32	1	18	4	.....	3	3	4	18	2	3	21	15	4	.....	54
Buier,	6	23	2	31	7	21	6	3	4	14	1	3	26	20	2	.....	54
Carbondale,	18	20	8	43	3	18	4	1	2	37	3	3	21	24	3	.....	48
Carlisle (total),	9	20	2	12	2	.....	1	.....	2	13	.....	.....	7	6	2	.....	36
White,	8	18	2	6	1	.....	1	.....	2	11	.....	.....	5	6	2	.....	32
Colored,	1	2	.....	6	1	.....	.....	.....	.....	2	.....	.....	2	.....	.....	.....	4
Carnegie,	6	9	3	28	2	9	.....	.....	1	4	.....	.....	7	.....	.....	.....	15
Chambersburg,	21	23	3	33	1	11	.....	1	1	23	4	1	.....	8	1	.....	36
Chester, (total),	46	71	10	69	9	63	4	9	4	49	4	3	55	34	6	.....	101
White,	41	60	6	53	8	50	4	9	3	45	2	3	42	29	5	.....	80
Colored,	5	11	4	16	1	13	.....	.....	1	4	2	.....	13	5	.....	.....	21

TABLE 4—Continued.

	Cause of Death.																
	Cerebral haemorrhage and softening.	Organic diseases of the heart.	Trichinosis.	Pneumonia (all forms).	Other respiratory diseases.	Diphtheria and enteritis (under 2 years).	Appendicitis.	Hemipia, intestinal obstruction.	Cirrhosis of the liver.	Nephritis, Bright's disease.	Puerperal fever.	Other puerperal affections.	Congenital debility and malformations.	Violent deaths (excluding suicide).	Suicide.	Undeclared and unknown.	All other causes.
Coatesville, (total),	12	10	.....	14	2	11	.....	.....	1	10	.....	.....	1	16	8	1	16
White,	12	8	.....	10	2	10	.....	.....	1	9	.....	.....	1	15	8	1	16
Colored, .....	.....	2	.....	4	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Columbia,	10	22	.....	3	1	6	1	1	2	12	2	2	1	9	10	2	19
Connellsville,	8	10	1	29	1	10	1	4	1	10	2	2	18	26	4	1	19
DuBois,	5	17	.....	15	3	10	1	.....	.....	7	1	3	13	18	.....	2	24
Dunmore,	29	26	25	36	1	41	.....	.....	.....	15	1	3	42	42	2	2	27
Duquesne,	8	7	.....	23	6	36	.....	.....	4	6	.....	2	30	30	.....	3	24
Easton,	37	48	7	45	.....	13	11	14	.....	4	.....	2	29	56	4	2	69
Erie,	61	134	6	112	5	84	16	13	16	89	0	3	60	75	13	.....	167
Farrell,	8	8	.....	21	2	19	2	1	2	2	2	2	21	21	8	4	27
Greensburg,	7	14	.....	25	.....	6	2	.....	1	12	1	2	12	52	4	7	41
Harrisburg,	17	20	.....	42	19	29	14	12	7	94	8	13	72	80	13	3	102
Hazleton,	17	21	.....	37	7	33	17	7	2	28	7	6	27	43	1	3	55
Homestead,	6	21	6	52	2	38	.....	.....	2	16	2	1	19	11	2	1	23
Johnstown,	20	26	8	107	11	64	14	17	10	46	16	8	115	104	4	4	155
Lancaster,	45	68	6	42	5	39	10	6	6	68	2	4	49	43	4	1	106
Lebanon,	29	23	8	37	5	6	1	4	1	24	2	2	22	13	5	6	72
McKees Rocks,	2	5	.....	38	3	28	1	1	4	4	.....	.....	25	14	5	1	19
McKeesport,	18	40	6	79	6	71	12	10	5	35	6	6	58	51	4	3	113
Mahanoy City,	5	12	7	11	7	18	.....	2	2	12	1	1	9	22	1	5	38
Meadville,	25	13	.....	10	3	4	1	1	3	15	1	2	18	16	4	1	39
Monessen,	2	4	.....	36	.....	45	.....	1	1	16	.....	.....	1	16	8	15	32
Mount Carmel,	10	13	2	21	3	37	.....	8	5	13	3	.....	20	15	.....	.....	20
Nanticoke,	5	15	3	55	6	45	4	.....	3	12	1	2	20	45	4	.....	39

New Castle,	14	33	6	63	7	33	3	5	2	16	1	4	41	37	3	10	96
Norristown,	40	106	6	64	5	16	3	9	4	44	2	2	18	43	1	1	123
North Philadelphia,	4	6	4	28	4	16	3	5	2	11	2	2	15	10	1	1	20
Old City,	16	24	3	26	4	7	4	5	2	11	4	4	21	20	2	1	47
Old Forge,	3	9	3	48	8	38	2	2	1	7	4	4	18	13	1	1	11
Philadelphia (total),	1,094	3,269	458	2,780	349	1,780	202	298	279	2,891	169	151	1,283	1,298	273	40	3,762
White,	1,036	3,030	406	2,623	316	1,648	186	212	271	2,685	156	138	1,249	1,140	265	40	3,430
Colored,	58	240	52	257	33	132	16	16	8	296	13	13	134	58	8	5	332
Phoenixville,	9	10	5	16	5	11	1	1	1	17	1	1	16	15	1	1	25
Pittsburgh (total),	356	671	165	1,358	136	586	94	82	94	561	63	54	637	619	95	17	1,837
White,	343	616	156	1,234	125	562	90	79	87	461	62	49	601	585	91	13	1,292
Colored,	13	55	9	124	11	24	4	3	7	40	1	6	34	34	4	4	65
Pitston,	9	32	18	45	7	37	4	1	4	12	1	3	18	48	2	1	36
Plymouth,	4	15	4	22	3	28	.....	2	2	9	.....	1	15	16	.....	1	47
Pottstown,	97	96	1	15	1	7	2	3	1	18	1	2	14	9	.....	1	41
Reading,	53	37	2	21	4	13	7	3	7	34	2	1	21	49	3	1	49
Scranton,	17	28	16	34	13	63	15	12	13	97	7	12	95	75	21	8	215
Sharon,	117	298	40	382	23	259	30	28	13	121	12	26	126	222	20	2	315
Shamokin,	24	19	4	20	6	12	1	.....	2	20	4	1	19	12	2	2	35
Sharon,	10	15	1	18	1	6	.....	5	2	2	.....	3	19	19	2	1	47
Shenandoah,	13	13	19	48	13	110	2	.....	1	5	.....	3	42	55	3	9	54
South Bethlehem (Northampton),	9	10	3	33	3	44	.....	2	4	21	.....	1	41	16	4	1	40
Stratton,	12	9	2	17	3	20	.....	.....	1	8	.....	3	27	10	1	1	23
Sunbury,	9	17	2	7	4	9	.....	2	1	13	2	3	12	6	1	2	31
Uniontown (Fayette),	10	13	2	38	1	19	3	2	1	19	1	4	10	37	1	1	57
Warren,	5	17	4	11	4	4	3	2	.....	12	1	4	8	13	.....	1	40
Washington,	11	59	6	39	4	5	4	5	3	19	1	3	20	32	1	.....	58
West Chester (total),	18	23	2	27	1	13	5	6	.....	29	2	.....	10	21	2	.....	40
White,	15	17	2	17	1	6	3	5	.....	24	1	2	6	18	2	.....	46
Colored,	3	6	.....	10	.....	7	.....	1	.....	.....	1	1	4	3	.....	1	14
Wilkes-Barre,	53	98	20	103	19	67	17	15	9	71	6	10	79	136	10	6	178
Williamsburg,	14	28	4	56	2	4	3	2	4	16	4	1	15	30	.....	2	46
Williamsport,	37	61	5	21	6	17	10	12	7	34	4	9	38	43	7	.....	115
York,	55	69	5	53	7	21	7	4	9	68	6	6	39	34	4	.....	100
Counties (Rural, Exclusive of municipalities over 10,000),																	
Adams,	52	59	3	46	8	14	.....	2	1	27	1	2	19	17	1	3	66
Allegheny,	163	392	70	623	61	397	21	33	59	270	23	18	406	322	40	13	757
Armstrong,	38	69	15	82	8	59	1	10	8	42	3	7	79	9	14	128	
Beaver,	43	81	12	138	8	86	5	8	7	51	2	3	82	78	11	6	175
Bedford,	33	41	3	39	4	22	1	4	4	43	1	2	33	33	4	5	96

TABLE 4—Continued.

	Cause of Death.																
	Cerebral haemorrhage and softening.	Organic diseases of the heart.	Bronchitis.	Pneumonia (all forms).	Other respiratory diseases.	Diarrhoea and enteritis (under 2 years).	Appendicitis.	Hernia, intestinal obstruction.	Cirrhosis of the liver.	Nephritis, Bright's disease.	Puerperal fever.	Other puerperal affections.	Congenital debility and malformations.	Violent deaths (excluding suicide).	Suicide.	Undefined and unknown.	All other causes.
Berks,	131	159	14	90	16	38	1	7	17	78	2	8	95	75	24	14	205
Blair,	59	71	5	62	11	33	1	9	9	65	6	6	52	42	5	6	108
Bradford,	82	131	13	45	8	18	3	6	7	38	3	2	47	53	7	8	168
Bucks,	79	120	16	85	20	29	4	9	10	96	3	3	52	67	18	16	164
Butler,	45	66	12	44	6	30	1	7	3	24	.....	4	35	33	9	9	34
Cambridge,	28	105	9	207	16	152	11	5	10	60	11	10	210	116	11	8	134
Cameron,	4	7	1	2	.....	4	.....	.....	.....	5	.....	.....	9	8	1	1	9
Carbon,	38	43	11	94	13	72	4	6	7	53	15	.....	70	75	6	7	131
Centre,	52	67	8	43	11	23	7	.....	.....	23	.....	.....	48	48	3	3	97
Chester,	93	152	11	66	6	52	1	6	5	93	2	6	53	64	7	12	159
Clarton,	32	43	6	26	7	22	2	8	7	28	2	1	24	44	3	5	64
Clearfield,	57	56	8	55	10	41	2	9	5	42	3	10	86	58	5	18	147
Clinton,	29	51	2	41	9	9	8	2	3	32	1	3	30	39	1	5	82
Columbia,	64	77	3	44	9	31	4	7	6	33	5	6	47	36	1	9	99
Crawford,	76	82	14	31	4	13	.....	.....	.....	53	1	2	27	31	8	6	167
Cumberland,	52	76	10	37	11	20	1	5	5	44	2	5	47	26	2	4	121
Dauphin,	62	96	12	55	16	29	2	7	4	56	.....	3	62	51	10	3	205
Delaware,	92	119	14	73	13	45	4	5	12	108	3	3	59	57	11	3	200
Elk,	17	30	1	37	3	22	2	3	6	15	.....	1	45	36	1	5	66
Erle,	64	93	6	44	3	15	2	9	6	51	6	8	33	53	13	6	129
Kayette,	52	106	25	250	16	230	3	15	5	76	12	23	205	178	21	35	276
Forest,	8	6	.....	4	.....	4	.....	.....	.....	4	.....	.....	8	8	.....	1	15
Franklin,	58	55	5	39	6	23	2	3	6	48	2	5	33	15	3	1	95
Fulton,	5	12	.....	1	.....	2	.....	.....	.....	7	.....	.....	4	5	.....	2	24
Greene,	22	22	2	19	6	9	.....	.....	.....	17	3	.....	16	12	1	7	47

Huntingdon,	38	82	7	44	7	22	3	3	4	39	2	5	35	49	.....	5	4	97
Indiana,	39	72	11	98	7	80	3	5	6	53	3	8	87	78	.....	11	8	162
Jefferson,	38	61	10	61	17	36	7	11	6	39	2	4	56	53	.....	1	6	133
Junata,	22	50	1	13	2	2	.....	5	9	16	1	2	9	13	.....	1	4	21
Lackawanna,	48	120	39	208	19	201	.....	5	13	97	8	16	114	136	.....	13	2	225
Lancaster,	153	173	11	93	13	40	1	10	10	123	2	6	87	58	.....	8	6	257
Lawrence,	22	31	6	49	7	24	3	6	3	21	1	3	40	44	.....	.....	7	107
Lebanon,	65	142	3	35	7	16	.....	2	10	34	5	4	31	23	.....	7	10	169
Lehigh,	177	169	15	77	12	65	5	5	8	63	8	8	57	101	.....	14	12	297
Luzerne,	113	188	69	407	63	412	6	13	23	128	15	15	271	318	.....	20	35	513
Lycoming,	49	71	4	45	2	10	.....	3	4	53	3	6	39	33	.....	5	1	96
McKean,	25	43	2	23	7	16	3	10	3	29	3	3	29	31	.....	2	3	70
Mercer,	50	89	7	43	8	21	1	3	6	27	2	4	31	55	.....	4	13	122
Mifflin,	30	44	.....	19	8	18	.....	1	5	28	3	3	33	16	.....	.....	1	54
Monroe,	31	31	2	23	3	8	.....	.....	.....	18	.....	1	22	14	.....	2	5	57
Montgomery,	148	202	20	124	16	54	3	13	20	121	4	5	115	115	.....	13	4	255
Montour,	35	36	.....	11	2	7	.....	4	3	8	.....	1	13	25	.....	.....	3	70
Northampton,	71	91	19	85	8	64	1	3	3	50	.....	6	83	50	.....	10	15	145
Northumberland,	52	75	7	97	12	85	6	5	5	48	6	7	82	79	.....	7	17	132
Perry,	30	43	1	26	2	4	.....	1	1	23	.....	3	17	15	.....	4	4	49
Pike,	11	17	1	11	2	.....	1	2	3	15	1	1	3	10	.....	2	.....	12
Potter,	21	26	1	20	5	6	2	2	1	15	.....	3	17	20	.....	1	.....	40
Schuykill,	113	171	17	223	52	207	10	13	17	117	10	15	192	234	.....	14	17	374
Snyder,	15	23	.....	14	3	4	.....	6	6	23	1	3	11	10	.....	.....	8	23
Somerset,	31	59	8	102	4	83	1	5	5	46	13	10	101	91	.....	8	17	157
Sullivan,	9	13	.....	9	.....	7	.....	.....	1	4	2	1	8	6	.....	.....	.....	15
Susquehanna,	50	76	6	54	2	22	2	6	2	33	1	4	24	28	.....	5	.....	130
Tioga,	53	74	1	32	6	4	.....	7	5	46	3	4	24	21	.....	5	5	100
Union,	16	43	.....	4	1	4	.....	2	1	13	.....	1	9	8	.....	1	3	38
Venango,	34	57	3	31	11	9	1	6	7	28	1	3	23	27	.....	3	7	110
Warren,	39	67	4	33	5	4	.....	.....	.....	29	.....	2	17	30	.....	8	2	131
Washington,	76	118	29	215	17	237	.....	9	14	60	8	14	190	229	.....	12	21	291
Wayne,	36	48	6	37	.....	10	2	2	5	46	3	2	18	24	.....	.....	5	54
Westmoreland,	112	155	34	297	27	300	8	22	22	79	16	15	247	267	.....	32	147	367
Wyoming,	4	10	.....	17	.....	8	2	1	2	9	2	.....	12	10	.....	.....	.....	43
York,	86	133	5	86	5	35	1	5	8	77	3	.....	79	47	.....	7	.....	176

MORTALITY TABLE 5.

Deaths in the Entire State, for Each Municipality Having More Than 10,000 Population, and for the Rural Sections of Each County, Including all Municipalities Having Less Than 10,000 Population; by Color, Nativity, and Parent Nativity. (Stillbirths Excluded.)

	Total.	White.	Native.	Both parents native.	Both parents foreign.	Both parents unknown.	Native and foreign parents.	Native unknown parents.	Foreign unknown parents.	Foreign.	Unknown.	Colored.	Negro.	Chinese.	Japanese.	Indian.	Other color.
Entire State,	114,822	110,100	85,503	47,726	23,541	4,211	6,212	2,594	919	29,532	1,015	4,732	4,695	27	3	7	.....
Total municipalities over 10,000 population,	60,573	56,871	41,403	20,434	13,336	2,182	3,660	1,259	492	14,960	508	3,707	3,673	26	3	5	.....
Total rural (including municipalities of less than 10,000 population),	54,254	53,229	44,100	27,292	10,205	2,019	2,552	1,665	427	8,622	507	1,025	1,022	1	.....	2	.....
Municipalities (of 10,000 or over).																	
Albion,	907	965	776	570	148	10	92	33	8	125	4	2	3	.....	.....	.....	.....
Altoona,	811	793	702	512	126	17	32	15	3	80	2	18	18	.....	.....	.....	.....
Beaver Falls,	183	183	138	107	36	1	1	8	1	49	3	5	5	.....	.....	.....	.....
Bethlehem,	163	164	130	128	36	4	7	5	1	13	1	1	1	.....	.....	.....	.....
Braddock,	366	354	250	178	146	4	14	7	1	98	6	12	12	.....	.....	.....	.....
Bradford,	224	222	170	95	24	15	12	11	2	46	7	1	1	.....	.....	.....	.....
Butler,	264	262	226	127	62	5	17	8	2	63	3	2	2	.....	.....	.....	.....
Carbondale,	222	222	207	93	78	7	24	8	2	84	1	.....	.....	.....	.....	.....	.....
Carlisle,	132	132	110	91	4	1	4	4	.....	7	5	.....	.....	.....	.....	.....	.....
Carnegie,	115	106	85	32	41	1	10	1	.....	21	.....	9	9	.....	.....	.....	.....
Chambersburg,	213	189	179	139	12	10	10	13	3	9	2	24	24	.....	.....	.....	.....
Chico,	693	566	431	216	140	17	35	16	6	133	1	127	127	.....	.....	.....	.....
Coatesville,	131	118	114	72	20	9	9	5	.....	.....	.....	13	13	.....	.....	.....	.....
Columbia,	160	151	133	98	14	6	11	3	1	18	.....	9	9	.....	.....	.....	.....
Connellsville,	135	169	134	100	20	4	4	5	1	33	2	16	16	.....	.....	.....	.....

TABLE 9—Continued.

	Total.	White.	Native.	Both parents native.	Both parents foreign.	Both parents unknown.	Native and foreign parents.	Native unknown parents.	Foreign unknown parents.	Foreign.	Unknown.	Colored.	Negro.	Chinese.	Japanese.	Indian.	Other color.
Wilkesburg,	285	284	222	187	28	10	28	10	10	60	9	14	14	.....	.....	.....	.....
Williamsport,	641	638	460	300	40	29	51	24	24	30	9	15	14	.....	.....	.....	.....
York,	676	640	604	480	41	22	51	22	4	30	9	38	36	.....	.....	.....	.....
Counties (Rural, including Municipalities of less than 10,000 population)...																	
Adams,	424	419	413	350	6	18	8	20	20	5	2	6	9	.....	.....	.....	.....
Allegheny,	4,795	4,640	3,219	1,317	1,291	172	324	87	48	1,389	2	158	158	.....	.....	.....	.....
Armstrong,	825	819	710	494	126	17	43	23	4	105	6	6	6	.....	.....	.....	.....
Beaver,	1,020	986	887	427	258	39	61	19	3	173	16	24	24	.....	.....	.....	.....
Bedford,	426	420	400	327	15	20	7	24	2	15	5	6	6	.....	.....	.....	.....
Berks,	1,286	1,280	1,106	83	33	27	20	22	1	65	6	6	6	.....	.....	.....	.....
Blair,	780	772	561	367	74	30	26	23	2	45	11	8	8	.....	.....	.....	.....
Bradford,	902	895	607	477	67	37	30	26	10	52	8	7	7	.....	.....	.....	.....
Bucks,	1,059	1,018	721	427	68	36	35	39	3	110	6	41	41	.....	.....	.....	.....
Butter,	522	521	443	292	83	16	34	16	3	75	2	1	1	.....	.....	.....	.....
Cambria,	1,546	1,543	1,215	504	564	20	97	18	12	319	9	3	3	.....	.....	.....	.....
Cameron,	65	65	68	36	9	5	3	3	2	7	.....	.....	.....	.....	.....	.....	.....
Carbon,	829	827	637	331	222	15	56	10	4	174	16	2	2	.....	.....	.....	.....
Centre,	560	549	370	44	243	44	44	44	4	44	6	6	7	.....	.....	.....	.....
Chester,	1,012	922	834	625	50	41	34	39	5	80	8	120	120	.....	.....	.....	.....
Clarion,	398	387	359	282	23	21	12	16	5	33	5	1	1	.....	.....	.....	.....
Clearfield,	841	841	677	382	160	27	76	25	7	163	4	4	4	.....	.....	.....	.....
Clinton,	466	394	340	251	39	22	19	2	2	50	4	9	9	.....	.....	.....	.....
Columbia,	574	569	520	366	80	25	18	26	6	37	2	6	6	.....	.....	.....	.....
Crawford,	670	667	577	376	64	43	29	50	15	79	11	3	3	.....	.....	.....	.....
Cumberland,	581	585	559	472	14	28	9	32	4	64	2	16	16	.....	.....	.....	.....
Dauphin,	821	821	601	407	59	29	16	29	7	64	17	26	26	.....	.....	.....	.....
Delaware,	1,023	842	681	407	124	95	23	23	10	261	10	102	102	.....	.....	.....	.....
Elk,	387	387	324	221	46	14	62	7	2	100	.....	.....	.....	.....	.....	.....	.....
Eric,	704	701	575	363	62	66	34	39	11	115	11	3	3	.....	.....	.....	.....

Pozette,	1,897	1,828	1,602	715	622	31	71	41	19	301	35	69	1	1
Forest,	75	74	67	51	6	6	4	1	.....	7	.....	.....	.....	.....
Franklin,	766	728	640	495	42	41	24	23	6	80	3	5	1	.....
Fulton,	116	113	110	98	1	4	4	3	.....	.....	3	3	.....	.....
Greene,	279	275	266	226	6	12	2	19	1	.....	3	4	.....	.....
Huntington,	477	471	432	340	30	26	15	17	4	35	4	6	.....	.....
Indiana,	886	882	771	447	230	16	47	26	6	103	8	4	.....	.....
Jefferson,	673	671	628	531	125	19	36	11	6	141	3	2	.....	.....
Juniata,	303	303	199	161	3	12	6	15	.....	3	.....	.....	.....	.....
Lackawanna,	1,490	1,486	1,029	315	664	22	110	11	.....	452	6	4	.....	.....
Lancaster,	1,319	1,294	1,229	1,099	27	32	29	47	6	46	9	26	.....	.....
Lawrence,	421	345	301	201	88	10	21	20	6	64	6	6	.....	.....
Lebanon,	603	602	479	407	30	30	12	7	.....	18	6	1	.....	.....
Lehigh,	1,101	1,101	689	689	147	60	22	11	3	174	6	3	.....	.....
Luzerne,	3,197	3,185	2,281	1,176	1,116	61	240	28	31	854	45	12	.....	.....
Lysenning,	621	616	478	377	31	22	18	21	6	35	9	6	.....	.....
McKeon,	383	382	292	174	69	26	21	8	5	35	5	3	.....	.....
Mercer,	681	678	578	379	66	62	42	31	6	86	14	3	.....	.....
Mifflin,	369	365	253	263	11	17	7	7	9	9	1	4	.....	.....
Monroe,	579	574	353	199	12	17	8	16	1	21	.....	6	.....	.....
Montgomery,	1,657	1,656	1,283	887	382	80	72	47	10	281	12	81	.....	1
Morris,	375	373	292	100	10	75	8	15	3	45	6	3	.....	.....
Northampton,	933	930	784	521	181	26	28	22	6	142	8	3	.....	.....
Northumberland,	870	867	719	418	183	26	46	15	3	140	8	3	.....	.....
Perry,	269	269	265	215	8	16	6	20	1	.....	2	.....	.....	.....
Pike,	112	110	86	60	13	3	8	3	.....	22	0	0	.....	.....
Pottler,	269	264	224	145	23	36	9	12	3	24	11	.....	.....	.....
Northampton,	2,285	2,282	1,624	863	616	37	121	27	20	529	9	3	.....	.....
Snyder,	1,196	1,186	1,011	152	3	18	6	14	.....	.....	3	.....	.....	.....
Somerset,	937	928	736	468	243	23	25	26	.....	125	.....	9	.....	.....
Sullivan,	97	97	82	41	20	6	15	1	1	15	.....	.....	.....	.....
Susquehanna,	656	655	479	307	72	85	25	22	8	71	6	1	.....	.....
Tioga,	506	506	312	26	36	41	30	29	2	47	9	.....	.....	.....
Union,	179	176	169	139	4	4	1	4	.....	6	1	3	.....	.....
Yenango,	478	467	406	281	37	32	27	.....	6	53	9	11	.....	.....
Warren,	435	432	335	153	24	29	25	23	2	92	14	3	.....	.....
Washington,	1,922	1,837	1,669	654	654	24	99	45	23	247	21	86	.....	.....
Wayne,	366	366	167	167	61	24	17	10	9	74	4	1	.....	.....
Westmoreland,	2,668	2,625	2,080	997	781	68	150	45	39	626	19	43	.....	.....
Wyoming,	203	201	174	128	12	13	6	19	2	21	6	2	.....	.....
York,	983	976	817	517	18	31	16	15	6	54	.....	.....	.....	.....

MORTALITY TABLE 6.
Deaths in the Entire State by Sex, Age, Color, Nativity, and Parent Nativity. (Stillbirths Excluded.)

Registration Area.	Age													
	All ages	Under 1	1	2	3	4	Under 6	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39
Total	114,822	25,146	4,775	2,014	1,345	928	24,208	2,757	1,654	2,509	3,704	4,085	4,124	4,726
Males	62,523	14,156	2,514	1,082	737	465	13,984	1,496	860	1,372	2,050	2,200	2,357	2,740
Females	52,339	10,990	2,231	932	608	463	10,224	1,261	794	1,137	1,654	1,885	1,767	1,986
White	110,100	24,261	4,575	1,930	1,304	894	32,964	2,657	1,559	2,340	3,482	3,790	3,826	4,391
Males	59,927	13,672	2,444	1,040	718	453	18,327	1,386	822	1,297	1,926	2,096	2,204	2,533
Females	50,173	10,589	2,131	890	586	441	14,637	1,271	737	1,043	1,556	1,694	1,622	1,857
Native	85,568	24,127	4,495	1,879	1,259	856	32,616	2,548	1,451	1,925	2,451	2,466	2,486	2,772
Males	45,446	13,698	2,402	1,018	695	489	18,162	1,323	762	1,048	1,226	1,248	1,279	1,457
Females	40,077	10,519	2,093	861	564	417	14,454	1,235	689	1,877	1,225	1,248	1,207	1,315
Both parents native, {M.,	24,851	6,295	964	445	312	203	8,279	727	463	652	754	720	741	812
One or both parents foreign, {F.,	16,619	4,745	826	373	256	204	6,404	715	421	591	794	822	771	809
Parentage unknown, {M.,	3,946	6,985	1,405	560	350	200	9,500	577	288	370	414	413	438	511
{F.,	3,159	5,520	1,228	492	303	211	7,736	466	256	290	381	367	346	414
{M.,		3,946	1,332	13	6	2	383	19	11	26	58	85	100	134
{F.,		3,159	254	16	6	2	314	14	12	26	50	59	90	92
Foreign	23,582	104	76	50	44	37	311	103	107	405	986	1,274	1,274	1,535
Males	13,078	48	41	22	23	13	147	59	60	243	658	836	856	967
Females	9,964	56	35	28	21	24	164	44	47	162	328	438	418	538

	1,015	30	4	1	1	1	1	37	6	1	10	45	50	76	93
Unknown,															
Males,	803	16	1	.....	.....	.....	.....	18	4	.....	6	42	42	69	79
Females,	212	14	3	.....	.....	.....	.....	19	2	.....	4	3	8	7	14
Colored,	4,732	885	200	84	41	34	1,214	100	100	95	169	222	296	288	336
Males,	2,596	484	100	42	19	12	657	50	50	38	75	134	164	153	217
Females,	2,136	401	100	42	22	22	687	50	50	57	94	98	132	135	119
Negro,	2,565	484	100	42	18	12	656	50	50	38	74	124	162	149	214
Indian,	2,139	399	100	42	22	22	685	50	50	57	93	97	132	135	119
Chinese,	25	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Japanese,	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other colored, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE 6—Continued.

Registration Area.	Age											Un- known		
	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 to 94		95 to 99	100 and over
Total	4,784	5,060	5,608	5,916	6,708	7,433	7,470	6,419	4,485	2,245	715	158	34	29
Males	2,824	3,005	3,281	3,331	3,775	4,026	3,723	3,145	2,049	928	287	62	8	19
Females	1,960	2,055	2,327	2,585	2,933	3,407	3,747	3,274	2,436	1,317	428	86	26	10
White	4,436	4,715	5,317	5,703	6,476	7,254	7,331	6,313	4,423	2,212	699	151	27	25
Males	2,610	2,808	3,113	3,202	3,688	3,934	3,631	3,091	2,021	913	280	63	7	15
Females	1,826	1,907	2,204	2,501	2,788	3,320	3,680	3,222	2,402	1,299	419	88	20	10
Native	2,840	2,903	3,484	3,915	4,288	4,868	4,884	4,405	3,087	1,518	475	96	14	11
Males	1,516	1,592	1,899	2,111	2,361	2,627	2,433	2,165	1,401	620	199	39	4	4
Females	1,324	1,311	1,585	1,804	1,927	2,241	2,451	2,240	1,686	898	276	57	10	7
Both parents native	748	857	1,042	1,191	1,492	1,757	1,632	1,476	940	409	124	21	2	3
One or both parents foreign	790	775	920	1,078	1,225	1,512	1,707	1,546	1,156	617	183	32	3	4
Percentage unknown	583	629	638	696	768	832	843	769	569	261	21	6	1	1
	424	413	502	529	440	384	377	326	199	114	34	8	4	3
	185	206	229	294	361	438	453	420	317	155	54	12	1	1
	100	123	163	197	262	345	367	363	331	167	59	17	3	3
Foreign	1,500	1,721	1,738	1,720	2,112	2,317	2,376	1,865	1,238	663	214	50	13	10
Males	1,010	1,134	1,127	1,085	1,219	1,255	1,167	900	532	275	77	21	8	7
Females	490	587	611	635	893	1,062	1,209	965	696	388	137	29	10	3

MORTALITY TABLE 7.
Deaths in the Entire State and for Municipalities of More Than 100,000 Population, from Certain Causes, by Months and Color
(Stillbirths Excluded.)

Cause of Death.	MONTH OF DEATH.												Total.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ENTIRE STATE.													
All Causes ¹ .	114,832	10,736	9,325	11,684	10,735	9,469	7,916	8,581	9,568	9,240	8,811	8,891	9,426
Typhoid fever,	1,071	70	70	77	66	81	55	65	107	134	129	123	94
Malaria,	50	1	1	2	2	.....	51	1	2	2	8	2	8
Measles,	540	46	62	68	106	62	61	35	13	7	17	34	48
Scarlet fever,	830	108	102	132	93	84	87	82	41	24	54	46	52
Whooping cough,	639	94	109	123	120	123	83	87	64	35	31	44	33
Diphtheria and croup,	1,825	277	163	138	145	85	95	76	99	161	190	205	226
Influenza,	1,760	139	133	142	142	54	16	7	6	15	15	33	52
Tuberculosis of the lungs ² ,	8,841	739	756	903	860	868	639	654	705	677	607	636	698
Other forms of tuberculosis,	1,371	114	110	129	150	138	117	135	97	100	111	79	101
Meningitis,	656	48	48	63	85	56	56	40	60	47	47	46	44
Bronchitis,	1,644	183	223	220	215	141	86	72	71	77	97	114	140
Pneumonia (lobar and unqualified),	6,834	991	880	1,073	933	631	302	170	174	237	370	513	655
Bronchopneumonia,	5,164	652	657	682	682	450	241	175	152	183	249	360	455
Diarrhoea and enteritis (under 2 years),	7,868	254	217	289	232	293	361	1,284	1,930	1,490	371	333	254
Diarrhoea and enteritis (2 years and over),	1,221	54	54	80	77	62	86	133	217	290	114	85	61
Congenital debility ³ ,	2,518	157	211	207	180	180	151	193	286	316	247	189	186
Violent deaths (excluding suicide),	8,012	650	660	640	651	685	679	769	687	684	619	689	682
Suicide,	1,035	96	63	32	34	84	33	107	93	97	81	81	64
All other causes,	63,504	6,072	5,410	6,311	5,853	5,375	4,666	4,592	4,764	4,760	4,959	5,164	5,578
PHILADELPHIA (Total).													
All Causes ¹ .	26,739	2,634	2,365	2,837	2,566	2,171	1,823	2,032	2,107	1,827	1,864	2,069	2,344
Typhoid fever,	126	7	11	13	11	15	9	14	13	11	10	6	6
Malaria,	8	.....	.....	.....	.....	.....	1	1	.....	1	1	1	1
Measles,	73	1	7	7	5	6	5	5	3	2	4	7	16

1. Abridged list number.
2. International

	135	25	30	16	13	2	2	1	5	1	4
Scarlet fever	135	25	30	25	13	2	2	1	5	1	4
Whooping cough	46	40	50	40	21	19	19	16	16	28	2
Diphtheria and croup	52	47	54	47	16	15	15	13	13	38	6
Influenza	161	233	243	233	1	5	5	3	3	6	10
Tuberculosis of the lungs, ²	2,780	1,322	2,000	1,322	225	199	199	207	207	194	233
Other forms of tuberculosis	88	88	46	46	28	41	26	22	22	22	28
Meningitis	50	51	11	7	41	8	8	6	6	9	6
Bronchitis	458	66	71	71	90	25	18	16	16	28	24
Pneumonia (lobar and unqualified)	1,531	337	260	337	113	40	44	47	47	62	41
Bronchopneumonia	1,265	172	178	172	61	45	36	62	62	122	152
Diarrhoea and enteritis (under 2 years)	1,780	58	74	58	83	48	15	16	16	91	115
Diarrhoea and enteritis (2 years and over)	258	7	17	7	22	42	29	30	30	167	77
Congenital debility, ³	378	21	27	21	32	41	41	46	46	38	18
Violent deaths (excluding suicide)	1,238	105	106	105	107	94	102	84	84	89	80
Suicide	273	24	21	24	23	25	25	17	17	25	29
All other causes	15,275	1,347	1,611	1,347	1,222	1,064	1,068	1,115	1,115	1,279	1,279
	24,454	2,163	2,589	2,223	1,957	1,916	1,920	1,719	1,719	1,937	2,112
Typhoid fever	15	7	12	11	9	14	10	9	9	6	5
Malaria	7	1	6	1	1	1	1	1	1	1	1
Measles	71	7	6	4	9	5	3	4	3	7	15
Scarlet fever	135	25	20	25	16	16	16	1	1	4	1
Whooping cough	292	15	23	15	43	19	15	1	1	1	1
Diphtheria and croup	317	52	41	55	15	15	15	13	13	38	40
Influenza	155	32	32	32	8	1	1	3	3	6	11
Tuberculosis of the lungs, ²	2,309	210	225	234	242	171	185	172	172	169	201
Other forms of tuberculosis	318	21	32	40	25	24	24	21	21	20	25
Meningitis	51	7	11	9	10	6	8	8	8	9	6
Bronchitis	1,074	58	63	55	30	18	22	16	16	20	37
Pneumonia (lobar and unqualified)	1,354	272	219	186	53	52	37	40	40	342	111
Bronchopneumonia	1,048	139	199	131	82	62	45	40	40	58	83
Diarrhoea and enteritis (under 2 years)	1,906	48	67	61	60	31	393	333	333	184	91
Diarrhoea and enteritis (2 years and over)	311	28	35	18	16	19	21	21	21	17	20
Congenital debility, ³	1,140	97	77	50	117	79	94	88	88	87	107
Violent deaths (excluding suicide)	255	22	21	36	23	17	23	25	25	22	29
Suicide	11,151	1,401	1,494	1,391	1,128	992	1,000	988	988	1,159	1,350
All other causes	2,955	231	258	238	201	168	177	145	145	162	172
	11	1	1	1	3	3	3	1	1	1	1
	2	1	1	1	1	1	1	1	1	1	1
	41	6	7	5	7	6	3	1	1	1	1
	6	1	1	2	1	1	1	1	1	1	1
	6	1	1	3	1	1	1	1	1	1	1

PHILADELPHIA (White).

All Causes.¹

PHILADELPHIA (Colored).

All Causes.¹

TABLE 7—Continued.

MONTH OF DEATH.

Abridged International
List number.

Cause of Death.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Tuberculosis of the lungs, ²	47	34	44	45	40	33	28	28	35	30	24	23	420
Other forms of tuberculosis,	7	9	8	6	5	4	4	4	2	5	5	3	62
Meningitis,	1	1	1	1	1	3	1	1	2	2	2	4	7
Bronchitis,	4	4	8	6	4	2	3	2	7	5	4	4	52
Pneumonia (lobar and unqualified),	19	18	31	15	20	6	3	4	7	6	11	10	150
Pneumonia (lobar and unqualified),	21	21	14	14	13	2	2	5	4	4	8	10	107
Bronchopneumonia,	1	5	7	2	4	7	25	28	23	14	10	7	132
Diarrhea and enteritis (under 2 years),	3	2	2	3	1	3	4	1	6	5	1	1	37
Diarrhea and enteritis (2 years and over),	3	4	2	3	2	1	5	6	6	5	1	3	37
Congenital debility, ³	8	8	16	5	10	15	8	6	2	2	9	8	98
Violent deaths (excluding suicide),	1	2	2	2	2	3	3	2	1	1	1	1	8
Suicide,	113	90	117	125	94	86	72	89	78	76	90	91	1,121
All other causes,	848	836	951	783	719	600	673	696	684	713	664	685	8,857
PITTSBURGH (Total).													
All Causes, ¹	6	8	7	6	4	8	5	8	6	9	8	10	86
Typhoid fever,	3	4	3	2	7	5	5	1	1	1	3	3	53
Malaria,	19	13	22	16	17	21	10	11	6	13	19	16	188
Scarlet fever,	3	3	11	9	9	3	4	5	1	1	2	1	59
Diphtheria,	13	12	12	12	10	9	4	11	17	22	24	11	151
Influenza and croup,	2	9	9	10	10	9	4	4	17	22	24	11	135
Tuberculosis of the lungs, ²	57	61	59	57	63	57	44	54	49	42	46	33	677
Other forms of tuberculosis,	17	13	13	22	9	10	9	10	10	10	10	9	139
Meningitis,	7	7	8	9	4	7	9	6	6	6	6	2	54
Pneumonia,	17	24	20	22	13	4	5	14	12	7	14	13	165
Pneumonia (lobar and unqualified),	109	112	119	100	67	38	22	27	49	47	47	62	783
Bronchopneumonia,	88	70	130	52	41	23	25	35	12	36	37	49	572
Diarrhea and enteritis (under 2 years),	24	20	26	9	28	32	112	113	97	81	31	26	585
Diarrhea and enteritis (2 years and over),	7	5	7	9	5	8	8	15	8	8	7	6	82
Congenital debility, ³	41	20	6	8	13	5	15	24	21	23	17	21	184

35	Violent deaths (excluding suicide),	46	57	69	63	42	39
36	Suicide,	5	6	11	5	4	3
	All other causes,	375	316	356	366	35.2	37.0
	PITTSBURGH (White).						
	All Causes.¹	737	659	646	672	6.7	6.5
1	Typhoid fever,	7	8	6	9	8	10
2	Malaria,	2	1	1	1	2	11
3	Measles,	16	5	6	13	5	11
4	Scarlet fever,	22	21	1	13	18	11
5	Whooping cough,	12	3	1	1	1	1
6	Diphtheria and croup,	17	6	17	22	24	10
7	Influenza,	10	4	1	7	1	3
8	Other forms of the lungs, ²	53	38	42	37	42	28
9	Other forms of tuberculosis,	12	8	7	9	9	12
10	Meningitis,	2	4	2	2	2	2
11	Brainitis,	3	6	1	6	11	11
12	Pneumonia (color and unqualified),	20	4	12	6	11	11
13	Pneumonia (color and unqualified),	22	4	12	6	11	11
14	Bronchopneumonia,	87	37	29	45	44	55
15	Pneumonia (color and unqualified),	36	19	29	34	32	38
16	Diarrhea and enteritis (under 2 years),	40	33	20	34	30	23
17	Diarrhea and enteritis (2 years and over),	23	25	11	54	30	23
18	Concentral debility, ³	9	4	8	3	7	5
19	Diarrhea and enteritis (2 years and over),	7	6	3	3	7	5
20	Concentral debility, ³	4	5	19	21	17	18
21	Violent deaths (excluding suicide),	47	46	55	61	40	37
22	Suicide,	5	6	6	10	4	3
23	All other causes,	356	299	313	344	331	352
	PITTSBURGH (Colored).						
	All Causes.¹	46	44	38	41	37	50
1	Typhoid fever,	1	1	1	1	1	2
2	Malaria,	1	1	1	1	1	1
3	Measles,	5	1	1	1	1	1
4	Scarlet fever,	1	1	1	1	1	1
5	Whooping cough,	1	1	1	1	1	1
6	Diphtheria and croup,	4	4	7	1	3	6
7	Influenza,	3	1	3	1	1	1
8	Other forms of the lungs, ²	13	13	13	15	3	6
9	Other forms of tuberculosis,	1	1	3	3	1	1
10	Meningitis,	1	1	1	1	1	1
11	Brainitis,	2	1	1	1	1	1
12	Pneumonia (color and unqualified),	13	3	2	1	3	2
13	Pneumonia (color and unqualified),	13	3	2	1	3	2
14	Bronchopneumonia,	3	1	1	2	1	1
15	Pneumonia (color and unqualified),	5	4	5	4	4	4
16	Diarrhea and enteritis (under 2 years),	1	1	1	1	1	1
17	Diarrhea and enteritis (2 years and over),	1	2	1	1	1	1
18	Concentral debility, ³	2	2	2	2	2	2
19	Diarrhea and enteritis (2 years and over),	1	1	1	1	1	1
20	Concentral debility, ³	1	2	1	2	2	2
21	Violent deaths (excluding suicide),	1	2	1	2	2	2
22	Suicide,	1	1	1	1	1	1
23	All other causes,	19	17	13	22	21	18

53	Violent deaths (excluding suicide),	46	57	69	63	42	39
54	Suicide,	5	6	11	5	4	3
55	All other causes,	375	316	356	366	35.2	37.0
	PITTSBURGH (White).						
	All Causes.¹	737	659	646	672	6.7	6.5
1	Typhoid fever,	7	8	6	9	8	10
2	Malaria,	2	1	1	1	2	11
3	Measles,	16	5	6	13	5	11
4	Scarlet fever,	22	21	1	13	18	11
5	Whooping cough,	12	3	1	1	1	1
6	Diphtheria and croup,	17	6	17	22	24	10
7	Influenza,	10	4	1	7	1	3
8	Other forms of the lungs, ²	53	38	42	37	42	28
9	Other forms of tuberculosis,	12	8	7	9	9	12
10	Meningitis,	2	4	2	2	2	2
11	Brainitis,	3	6	1	6	11	11
12	Pneumonia (color and unqualified),	20	4	12	6	11	11
13	Pneumonia (color and unqualified),	22	4	12	6	11	11
14	Bronchopneumonia,	87	37	29	45	44	55
15	Pneumonia (color and unqualified),	36	19	29	34	32	38
16	Diarrhea and enteritis (under 2 years),	40	33	20	34	30	23
17	Diarrhea and enteritis (2 years and over),	23	25	11	54	30	23
18	Concentral debility, ³	9	4	8	3	7	5
19	Diarrhea and enteritis (2 years and over),	7	6	3	3	7	5
20	Concentral debility, ³	4	5	19	21	17	18
21	Violent deaths (excluding suicide),	47	46	55	61	40	37
22	Suicide,	5	6	6	10	4	3
23	All other causes,	356	299	313	344	331	352
	PITTSBURGH (Colored).						
	All Causes.¹	46	44	38	41	37	50
1	Typhoid fever,	1	1	1	1	1	2
2	Malaria,	1	1	1	1	1	1
3	Measles,	5	1	1	1	1	1
4	Scarlet fever,	1	1	1	1	1	1
5	Whooping cough,	1	1	1	1	1	1
6	Diphtheria and croup,	4	4	7	1	3	6
7	Influenza,	3	1	3	1	1	1
8	Other forms of the lungs, ²	13	13	13	15	3	6
9	Other forms of tuberculosis,	1	1	3	3	1	1
10	Meningitis,	1	1	1	1	1	1
11	Brainitis,	2	1	1	1	1	1
12	Pneumonia (color and unqualified),	13	3	2	1	3	2
13	Pneumonia (color and unqualified),	13	3	2	1	3	2
14	Bronchopneumonia,	3	1	1	2	1	1
15	Pneumonia (color and unqualified),	5	4	5	4	4	4
16	Diarrhea and enteritis (under 2 years),	1	1	1	1	1	1
17	Diarrhea and enteritis (2 years and over),	1	2	1	1	1	1
18	Concentral debility, ³	2	2	2	2	2	2
19	Diarrhea and enteritis (2 years and over),	1	1	1	1	1	1
20	Concentral debility, ³	1	2	1	2	2	2
21	Violent deaths (excluding suicide),	1	2	1	2	2	2
22	Suicide,	1	1	1	1	1	1
23	All other causes,	19	17	13	22	21	18

TABLE 7—Continued.

Cause of Death.	MONTH OF DEATH.												
	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
SCRANTON (Total).	2,221	157	177	201	178	189	170	199	216	189	172	170	222
All Causes. ¹	13	1	1	1	1	2	1	1	1	4	1	1	3
Typhoid fever,	10	1	1	1	1	6	1	1	1	1	1	1	3
Malaria,	4	1	1	1	1	1	1	1	1	1	1	1	3
Measles,	21	6	1	2	2	3	3	3	2	2	3	2	3
Scarlet fever,	32	6	2	2	2	3	3	3	2	2	3	2	3
Diphtheria and croup,	108	9	1	2	3	1	3	3	1	1	3	2	2
Influenza,	7	1	1	2	2	1	5	5	11	10	6	8	13
Tuberculosis of the lungs, ²	28	9	6	13	8	9	5	9	11	10	6	1	5
Other forms of tuberculosis,	10	3	3	3	1	4	3	5	1	1	2	1	5
Measles,	40	3	14	6	3	1	2	1	1	1	1	1	1
Pneumonia,	169	12	19	21	25	19	12	13	8	6	13	17	19
Bronchopneumonia,	163	12	16	20	15	19	14	13	8	12	17	13	19
Diarrhea and enteritis (under 2 years),	280	7	3	6	7	4	7	48	79	44	17	17	17
Diarrhea and enteritis (2 years and over),	17	2	1	2	2	2	3	3	5	2	2	2	1
Congenital debility, ³	222	1	1	1	1	1	1	3	2	2	2	2	1
Violent deaths (excluding suicide),	22	14	18	12	19	16	14	17	14	20	22	20	36
Suicide,	1	1	1	1	1	2	1	1	6	5	3	3	112
All other causes,	1,112	83	92	108	81	98	103	91	88	76	85	95	112

¹Exclusive of stillbirths.
²Including "acute military tuberculosis."
³Excluding "premature birth."

Abridged International List number.

MORTALITY TABLE 8.

Deaths in the Entire State and in Cities Having More Than 100,000 Population, for Certain Causes and Color, by Sub-divisions of Days, Weeks, and Months of the First Year of Life. (Stillbirths Excluded.)

Abridged list number.	Cause of Death.	Age, Under 1 Year, in Completed Days, Weeks, or Months.													
		Days.			Weeks.			Months.							
		Un-der 1.	1.	2.	3 to 6.	Un-der 1.	1.	2.	3.	Un-der 1.	1.	2.	3 to 5.	6 to 8.	9 to 11.
25,146	AREA, ENTIRE STATE.	3,030	1,048	856	1,732	6,646	1,694	1,251	984	10,555	2,448	2,025	4,401	3,232	2,411
138	All causes.	2	1	1	1	2	1	1	1	6	8	7	10	45	62
34	Measles.	1	1	1	1	1	1	1	1	3	1	1	8	6	15
569	Scarlet fever.	1	1	1	1	1	1	1	1	30	65	57	127	116	114
88	Whooping cough.	1	1	1	1	1	1	1	1	13	8	7	20	29	51
61	Diphtheria and croup.	1	1	1	1	1	1	1	1	15	8	5	14	13	8
51	Influenza.	1	1	1	1	1	1	1	1	4	5	5	15	13	9
48	Dysentery.	1	1	1	1	1	1	1	1	28	29	10	17	9	5
16	Erysipelas.	1	1	1	1	1	1	1	1	15	1	1	43	40	27
142	Tetanus.	1	1	1	1	1	1	1	1	9	5	9	14	39	43
131	Tuberculosis of the lungs.	1	1	1	1	1	1	1	1	6	9	5	8	22	17
69	Tuberculous meningitis.	1	1	1	1	1	1	1	1	2	2	2	6	4	4
236	Other forms of tuberculosis.	3	3	3	3	3	3	3	3	46	19	18	39	42	26
731	Syphilis.	3	3	3	3	3	3	3	3	12	12	16	30	46	11
112	Convulsions.	3	3	3	3	3	3	3	3	15	16	10	7	4	4
30	Organic diseases of the heart.	3	3	3	3	3	3	3	3	85	182	90	50	47	37
121	Acute bronchitis.	3	3	3	3	3	3	3	3	22	22	7	5	6	4
2,297	Pneumonia.	3	3	3	3	3	3	3	3	25	22	33	24	16	9
405	Bronchopneumonia.	3	3	3	3	3	3	3	3	17	15	22	33	24	11
6,405	Diseases of the stomach.	3	3	3	3	3	3	3	3	33	58	72	53	62	245
3,855	Diseases of the intestines.	3	3	3	3	3	3	3	3	88	88	101	115	94	368
277	Malnutrition.	3	3	3	3	3	3	3	3	152	30	48	33	31	57
1,753	Premature birth.	3	3	3	3	3	3	3	3	307	397	220	169	61	83
3,122	Malformation and anomalies.	3	3	3	3	3	3	3	3	3,052	336	333	126	3,387	128
772	Congenital debility.	3	3	3	3	3	3	3	3	1,040	348	227	158	1,743	50
265	Injuries at birth.	3	3	3	3	3	3	3	3	67	61	16	7	761	8
223	External causes.	3	3	3	3	3	3	3	3	70	70	16	4	17	43
27	Ill defined and unknown.	3	3	3	3	3	3	3	3	26	26	11	25	17	11
1,259	All other causes.	24	24	24	24	24	24	24	24	176	176	97	101	218	111

TABLE 8—Continued.

Abridged list number.	Cause of Death.	Age, Under 1 Year, in Completed Days, Weeks, or Months.														
		Days.			Weeks.			Months.								
		Under 1 Year.	1.	2.	3 to 6.	Under 1.	1.	2.	3.	Un-der 1.	1.	2.	3 to 5.	6 to 8.	9 to 11.	
AREA, PHILADELPHIA (Total).																
	All causes,	4,870	401	183	152	318	1,054	349	235	191	1,829	469	372	895	771	594
5	Measles,	16														
6	Scarlet fever,	7														
7	Whooping cough,	126														
8	Diphtheria and croup,	22														
9	Influenza,	9														
(12)	Dysentery,	10														
(12)	Erysipelas,	24														
(37)	Tetanus,	24														
13	Tuberculosis of the lungs,	29														
14	Tuberculous meningitis,	12														
15	Other forms of tuberculosis,	31														
(37)	Septicæmia,	25														
(37)	Meningitis,	64														
(37)	Convulsions,	64														
19	Organic diseases of the heart,	22														
20	Acute bronchitis,	176														
22	Pneumonia,	193														
(23)	Bronchopneumonia,	499														
24	Diseases of the stomach,	51														
25	Diarrhea and enteritis,	1,537														
(33)	Malformations,	61														
(33)	Premature birth,	661														
(33)	Injuries at birth,	488														
(33, 37)	External causes,	183														
35	Ill defined and unknown,	62														
38	All other causes,	7														
AREA, PHILADELPHIA (White).																
	All causes,	4,420	365	169	140	288	962	327	206	179	1,674	433	335	795	698	485

TABLE 8—Continued.

Cause of Death.	Age, Under 1 Year, in Completed Days, Weeks, or Months.														
	Days.			Weeks.			Months.								
	Under 1 Year.	1.	2.	3 to 6.	Under 1.	1.	2.	3.	Under 1.	1.	2.	3 to 5.	6 to 8.	9 to 11.	
(32, 37) Congenital debility,	52			9	21	5		1	32	3		5	8	1	
(37) Injuries at birth,	7	2	1	2	7				7						
(35) External causes,	14	2			2	1			3	3		5	2	1	
(38) Ill defined and unknown,															
All other causes,	19	1		1	2	1	1		4	3	2	4	5	1	
AREA, PITTSBURGH (Total).															
All causes,	1,868	261	63	127	526	114	55	61	756	177	170	341	221	202	
Measles,	15			1	1				1	1			6	7	
Scarlet fever,	5	1			1				1					3	
Whooping cough,	20									3	3		3	5	
Diphtheria and croup,	9											2	1	5	
Influenza,	2										1		1		
(12) Dysentery,	5									1			2	1	
(12) Erysipelas,	3				1				1				1	1	
(37) Tetanus,	2				2				2				1	1	
(13) Tuberculosis of the lungs,	32	1		1	1			1	2	4	5	14	6	1	
(14) Tuberculous meningitis,	13									1			4	4	
(15) Other forms of tuberculosis,	4												4		
(37) Syphilis,	24	2		2	4	1	3	2	10	1	3	4	2	2	
(37) Meningitis,	12												5	3	
(37) Convulsions,	37	1	1	3	6	6	1	1	14	5	2	5	7	6	
(37) Organic diseases of the heart,	33												4	3	
(30) Acute bronchitis,	30									8	5	14	4	8	
(29) Chronic bronchitis,	54	1		2	4	2	1	1	7	5	8	11	11	13	
(29) Bronchopneumonia,	232		3	9	12	10	10	6	38	27	23	47	42	45	
(29) Diseases of the stomach,	55								4	5	2	10	2	3	
(29) Diarrhea and enteritis,	455	1		9	11	14	14	16	55	47	57	130	88	78	
(33) Malformations,	143	33	10	13	21	21	5	13	116	12	10	10	1	1	
(33) Premature birth,	302	150	31	17	26	27	8	10	279	10	5	5	1	2	
(32, 37) Congenital debility,	255	85	11	17	20	19	7	5	114	35	35	50	13	8	
(37) Injuries at birth,	85	34	20	9	16	3	1		83	1					

24	Diseases of the stomach,	14	.....	1	.....	3	.....	1	.....	1	.....	8	.....	1	.....	2	.....	1	.....	2
25	Dysentery and enteritis,	184	.....	1	.....	6	.....	1	.....	7	.....	22	.....	1	.....	54	.....	1	.....	41
(33)	Malformations,	27	.....	2	.....	9	.....	2	.....	10	.....	21	.....	4	.....	4	.....	1	.....	1
(33, 37)	Premature birth,	82	.....	4	.....	15	.....	8	.....	1	.....	81	.....	1	.....	1	.....	1	.....	1
35	Congenital debility,	13	.....	1	.....	3	.....	1	.....	2	.....	11	.....	2	.....	3	.....	1	.....	1
36	Injuries at birth,	14	.....	3	.....	1	.....	1	.....	4	.....	11	.....	2	.....	3	.....	1	.....	1
37	External causes,	4	.....	1	.....	1	.....	1	.....	1	.....	2	.....	1	.....	1	.....	1	.....	1
38	All defined causes,	31	.....	1	.....	6	.....	3	.....	1	.....	12	.....	4	.....	2	.....	1	.....	4
	All other causes,	31	.....	1	.....	6	.....	3	.....	1	.....	12	.....	4	.....	2	.....	1	.....	4

¹Includes deaths of infants aged 21 to 23 days.



BIRTHS.



BIRTHS.

There were 219,542 living births registered during the year. The birth rate per 1,000 of population was 26.6, an increase of 0.9 as compared as with the previous year, and the highest birth rate recorded during the nine-year period, 1906-1914, inclusive; the birth rate for each year of this period being as follows:

1906,	23.4
1907,	24.1
1908,	26.2
1909,	26.1
1910,	26.5
1911,	26.2
1912,	25.6
1913,	25.7
1914,	26.6

The average age of all mothers was 27.1 years, of native mothers 27.4 and of foreign mothers 27.8 years. The average number of children including present birth born to all mothers was 3.6, to native mothers 3.2 and to foreign mothers 3.8. The average number of children living to all mothers was 3.0, to native mothers 2.9 and to foreign mothers 3.3. The average mother's age of legitimate first births was 23.9. The attendance at birth was: by physicians, 173,824; by midwives, or no attendance, 45,718.

TABULATION OF BIRTHS.

The following general birth tables for the year are presented:

Table 1. Births for the entire State, for each municipality having more than 5,000 population, for groups of municipalities having less than 5,000 population, and for the rural sections of each county exclusive of all municipalities; by sex and month of birth. (Stillbirths excluded).

Table 2. Births for the entire State, for all municipalities having more than 5,000 population, for all municipalities having less than 5,000 population, and for the rural sections of each county exclusive of all municipalities; by age and nativity of mother. (Stillbirths excluded).

Table 3. Births for the entire State, for all municipalities having more than 5,000 population, and for the rural sections of the counties exclusive of all municipalities; by nativity of mother and number of child. (Stillbirths excluded).

Table 4. Births for the entire State, for all municipalities having more than 5,000 population, for all municipalities having less than 5,000 population, and for the rural sections of the counties exclusive of all municipalities; by nativity of mother and number of her living children. (Stillbirths excluded).

Table 5. Plural and illegitimate births for the entire State and for certain subdivisions of the same, by nativity of mother. (Stillbirths excluded).

BIRTH TABLE 1.

Births for the Entire State, for Each Municipality Having More Than 5,000 Population, for Groups of Municipalities Having Less Than 5,000 Population, and for the Rural Sections of Each County Exclusive of all Municipalities; by Sex and Month of Birth. (Still-births Excluded.)

Area.	Aggre- gate.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Entire State,	To,.....	18,381	16,791	19,825	17,650	17,851	17,959	19,024	19,430	18,891	18,572	17,692	17,963
	M.,.....	113,180	9,348	10,294	9,089	9,161	9,329	9,774	9,880	9,620	9,571	9,153	9,349
	F.,.....	106,362	8,059	9,531	8,561	8,700	8,630	9,250	9,550	9,064	9,000	8,509	8,714
Total of all municipalities over 5,000 population,	To,.....	10,733	9,331	11,322	9,916	10,132	10,431	10,938	10,933	10,484	10,051	10,165	10,206
	M.,.....	64,656	5,502	5,906	5,088	5,170	5,437	5,601	5,628	5,465	5,529	5,237	5,317
	F.,.....	60,687	4,568	5,416	4,828	4,962	4,994	5,334	5,295	5,079	5,122	4,929	4,979
Total of all municipalities less than 5,000 population,	To,.....	29,340	2,220	2,637	2,408	2,450	2,316	2,620	2,553	2,502	2,482	2,256	2,386
	M.,.....	15,104	1,231	1,297	1,237	1,266	1,202	1,384	1,265	1,298	1,264	1,172	1,200
	F.,.....	14,236	1,056	1,290	1,171	1,184	1,114	1,216	1,248	1,204	1,218	1,081	1,186
Total rural, exclusive of all municipalities...	To,.....	64,859	5,290	5,846	5,226	5,290	5,212	5,456	5,644	5,708	5,429	5,270	5,281
	M.,.....	33,420	2,734	3,021	2,764	2,725	2,690	2,786	2,947	2,927	2,768	2,714	2,732
	F.,.....	31,439	2,496	2,825	2,562	2,564	2,522	2,670	2,697	2,781	2,661	2,556	2,549
Allentown,	To,.....	1,675	125	164	157	133	147	123	144	115	185	146	116
	M.,.....	833	63	80	79	69	72	65	78	55	94	63	63
	F.,.....	822	60	74	78	64	75	57	66	60	91	83	63
Altoona,	To,.....	1,629	151	150	136	123	144	147	131	144	129	128	127
	M.,.....	802	72	74	55	62	73	64	76	79	61	68	57
	F.,.....	820	65	76	81	62	71	83	55	65	68	60	70
Ambridge,	To,.....	314	22	32	33	20	30	28	28	26	22	18	27
	M.,.....	168	14	9	15	12	11	16	11	11	15	12	11
	F.,.....	146	14	11	18	8	13	12	17	12	7	6	16
Archbold,	To,.....	262	13	15	15	27	17	16	29	21	29	27	24
	M.,.....	143	6	5	10	13	9	13	14	15	15	15	18
	F.,.....	119	7	17	5	14	8	3	15	6	14	12	6
Ashland,	To,.....	141	12	20	8	16	7	10	16	13	5	7	13
	M.,.....	58	3	6	4	7	6	5	7	5	2	5	3
	F.,.....	83	9	14	4	9	1	5	9	8	3	2	10

TABLE 1—Continued.

Area.	Aggre- gate.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Ashley,	To,..... M,..... F,.....	23 15 124	20 10 10	19 11 8	22 11 11	25 13 12	21 6 7	22 9 13	29 16 13	25 15 10	17 8 9	17 9 8	20 9 7
Bangor,	To,..... M,..... F,.....	132 68 65	4 3 1	13 6 7	12 4 8	14 9 9	19 11 8	13 7 6	10 6 4	9 4 5	7 2 5	9 2 2	7 4 3
Beaver Falls,	To,..... M,..... F,.....	389 191 198	35 15 20	45 22 23	33 21 12	30 15 12	27 12 12	27 9 18	48 15 30	27 12 15	32 15 17	30 15 15	29 19 10
Bellevue,	To,..... M,..... F,.....	199 105 94	17 8 9	18 9 9	12 8 4	16 9 7	18 10 8	17 11 6	20 9 11	18 10 8	20 12 8	12 6 6	19 7 12
Berwick (Columbia),	To,..... M,..... F,.....	134 74 60	10 5 5	8 5 3	14 9 5	12 6 6	6 4 2	9 6 3	15 6 9	16 10 6	13 6 7	13 8 5	10 6 4
Bethlehem,	To,..... M,..... F,.....	358 186 172	29 16 13	30 15 14	30 16 15	28 13 15	32 18 14	31 18 13	36 14 22	31 15 16	24 13 16	26 14 11	22 14 13
Blakely,	To,..... M,..... F,.....	167 86 81	9 7 5	14 7 7	10 5 7	20 7 13	17 8 9	17 7 10	11 9 5	11 6 5	14 9 5	10 6 6	18 4 6
Bloomsburg,	To,..... M,..... F,.....	140 69 71	10 7 5	11 4 7	16 12 4	10 4 6	14 4 7	9 8 1	12 6 6	14 7 7	14 2 7	10 4 6	9 3 6
Braddock,	To,..... M,..... F,.....	831 459 392	61 33 28	72 40 32	69 35 34	55 26 29	58 30 28	67 30 28	90 46 44	60 42 30	79 45 34	76 45 34	72 35 37
Bradford,	To,..... M,..... F,.....	375 191 184	26 14 15	21 13 8	44 18 26	33 15 21	37 22 15	28 12 16	28 17 11	34 22 12	24 15 9	33 21 21	37 12 17
Bristol,	To,..... M,..... F,.....	311 157 154	17 8 9	10 6 5	26 12 14	21 13 8	23 13 10	13 6 7	15 6 9	20 11 9	50 29 21	24 16 8	35 9 26

Batler,	To,	715	53	75	63	48	55	69	63	64	55	61
	M.,	369	24	38	33	23	25	34	32	28	27	35
Carbondale,	F.,	346	29	37	30	25	30	25	31	36	28	29
	To,	453	34	41	33	44	37	43	41	32	35	40
Carlisle,	M.,	225	15	26	21	23	21	19	23	14	15	23
	F.,	233	19	15	21	26	21	19	23	14	15	23
Carnegie,	To,	193	17	19	11	19	10	12	15	7	20	21
	M.,	83	7	9	3	9	7	10	5	6	6	12
Carrick,	F.,	100	9	10	8	10	3	11	4	2	14	9
	To,	388	43	28	22	31	32	25	42	36	15	38
Catsaunqua,	M.,	295	19	12	13	20	21	17	24	21	17	19
	F.,	163	11	16	4	11	15	8	13	15	8	19
Chambersburg,	To,	214	19	15	13	22	21	23	15	14	24	12
	M.,	115	8	7	8	11	11	13	10	9	14	7
Charleroi,	F.,	99	6	8	6	11	10	16	9	6	10	5
	To,	88	8	9	7	6	8	6	7	5	5	6
Chester,	M.,	46	4	3	2	3	5	5	4	2	4	4
	F.,	42	4	6	3	3	3	1	3	1	3	2
Clearfield,	To,	295	29	28	17	25	21	30	24	22	24	32
	M.,	160	13	16	10	16	13	17	9	13	10	15
Coaldale (Schuylkill),	F.,	135	11	12	7	9	7	13	15	9	14	14
	To,	325	25	26	17	23	28	21	28	25	33	32
Columbia,	M.,	174	14	13	8	12	15	14	10	13	17	15
	F.,	152	9	13	9	11	17	14	11	15	18	16
Columbia,	To,	1,296	88	141	100	107	103	124	111	101	105	89
	M.,	637	47	67	48	54	66	65	67	67	50	39
Columbia,	F.,	619	59	74	52	53	37	59	45	51	48	50
	To,	201	17	17	18	18	14	11	15	18	20	22
Columbia,	M.,	102	9	9	10	7	5	5	13	6	10	10
	F.,	99	4	8	3	11	6	8	6	12	10	12
Columbia,	To,	217	18	21	24	19	15	16	13	25	16	18
	M.,	109	9	15	10	9	3	13	7	13	6	7
Columbia,	F.,	108	8	6	14	10	12	6	12	7	10	11
	To,	285	15	20	25	24	24	16	19	35	22	21
Columbia,	M.,	153	9	14	11	12	18	7	6	18	14	14
	F.,	132	6	6	14	12	19	9	13	17	12	7
Columbia,	To,	241	20	27	30	26	22	23	19	18	22	15
	M.,	130	10	10	10	16	11	13	10	9	11	17
Columbia,	F.,	111	10	12	7	10	11	10	9	6	5	10

TABLE 1—Continued.

Area.	Aggre- gate.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Connellsville,	To,..... M.,..... F.,.....	28 9 176	36 14 22	31 17 14	30 12 15	37 22 15	32 18 12	32 11 12	28 16 12	29 16 17	17 10 7	49 28 21	32 19 13
Conschocken,	To,..... M.,..... F.,.....	23 9 118	21 13 8	18 13 5	20 10 10	25 13 12	18 13 5	17 9 8	29 11 18	16 13 3	23 5 18	22 10 10	14 7 7
Coraopolis,	To,..... M.,..... F.,.....	15 10 92	13 6 12	16 8 8	8 5 3	16 7 9	14 7 7	14 6 8	19 10 9	12 5 7	10 5 6	10 9 6	8 9 12
Corry,	To,..... M.,..... F.,.....	102 50 52	10 4 5	9 5 4	7 4 3	9 4 5	8 2 6	11 7 4	7 4 3	7 4 3	10 8 7	10 6 6	8 4 4
Danville,	To,..... M.,..... F.,.....	169 81 88	11 4 7	12 9 3	15 9 6	14 7 7	15 7 8	15 7 8	20 9 11	12 9 5	21 9 12	12 10 5	9 7 5
Darby,	To,..... M.,..... F.,.....	137 70 67	14 6 8	13 5 7	8 7 5	12 7 8	15 9 4	13 7 3	11 6 5	13 6 7	5 4 1	16 5 11	10 5 5
Dickson City,	To,..... M.,..... F.,.....	405 210 135	24 12 12	41 24 17	42 23 19	39 20 19	31 19 12	41 21 20	30 17 13	26 17 17	30 20 10	40 15 28	26 11 15
Donora,	To,..... M.,..... F.,.....	475 242 233	43 24 19	42 24 18	48 22 25	34 20 14	31 14 17	34 18 16	35 20 15	54 28 26	42 26 18	31 15 18	48 15 27
DuBois,	To,..... M.,..... F.,.....	366 206 160	44 22 22	32 16 13	27 19 8	27 19 8	30 17 13	31 17 14	39 16 23	29 16 13	23 16 11	23 11 7	32 17 15
Dunmore,	To,..... M.,..... F.,.....	763 350 353	62 36 26	60 34 26	60 34 26	64 34 30	57 30 27	70 30 40	62 30 33	64 29 30	64 28 36	50 24 25	43 20 23
Duquesne,	To,..... M.,..... F.,.....	727 30 364	66 30 21	69 21 35	38 17 21	52 31 21	66 31 35	79 31 43	66 31 33	47 26 21	78 36 33	63 25 23	58 35 33

Duryea,	To,..... M.,..... F.,.....	289 143 146	24 14 10	27 15 12	31 14 17	29 17 12	27 11 16	23 14 9	30 9 11	26 10 16	28 13 15	19 13 6	57 11 16
East Conemaugh,	To,..... M.,..... F.,.....	270 121 116	20 9 10	17 9 8	30 18 12	21 11 10	22 14 8	22 14 8	20 8 12	15 8 7	19 13 6	27 9 18	16 8 8
East Pittsburgh,	To,..... M.,..... F.,.....	159 78 81	17 11 6	18 10 10	12 6 6	13 5 8	8 4 4	17 11 6	9 3 6	14 9 6	9 3 6	16 6 10	11 6 7
Easton,	To,..... M.,..... F.,.....	707 358 349	51 31 20	55 31 24	48 16 32	61 22 27	53 25 31	66 35 31	65 30 35	69 49 29	66 35 31	65 35 29	64 30 34
Edwardsville,	To,..... M.,..... F.,.....	229 108 168	27 13 14	27 13 10	23 10 13	20 9 11	14 9 5	17 12 5	15 10 5	8 7 7	20 11 9	14 7 9	24 15 9
Eric,	To,..... M.,..... F.,.....	2,215 1,140 1,075	167 84 83	196 108 88	180 89 91	169 87 82	123 69 64	218 114 104	189 98 91	184 97 87	209 107 102	178 91 87	206 114 92
Etna,	To,..... M.,..... F.,.....	228 109 119	22 10 9	25 10 12	22 9 13	20 9 7	25 11 14	17 9 8	11 5 6	15 7 8	21 7 14	19 11 8	12 7 5
Farrell,	To,..... M.,..... F.,.....	338 138 195	29 15 19	26 18 14	28 14 14	23 15 8	16 16 10	22 13 19	29 16 13	36 16 20	31 16 15	33 17 17	48 18 28
Forest City,	To,..... M.,..... F.,.....	296 131 145	24 14 10	24 9 6	34 20 14	24 10 14	21 8 13	27 14 15	33 14 19	24 13 11	18 9 9	20 11 10	27 17 10
Franklin (Venango),	To,..... M.,..... F.,.....	249 136 113	19 7 11	28 17 11	23 14 9	14 11 3	19 14 5	20 14 7	26 10 6	24 9 15	13 8 5	21 9 12	21 13 8
Freeland,	To,..... M.,..... F.,.....	264 132 132	31 17 12	24 14 14	21 10 10	18 12 6	25 14 11	23 10 13	19 13 6	20 14 16	14 9 6	11 6 5	19 6 13
Gilberton,	To,..... M.,..... F.,.....	215 121 94	16 11 5	21 12 9	28 14 14	19 9 10	18 11 7	11 5 6	15 11 4	25 11 14	14 8 6	10 6 2	22 14 8
Glassport,	To,..... M.,..... F.,.....	247 118 129	17 8 4	22 10 13	19 11 8	29 17 12	16 4 12	18 11 7	24 11 13	24 11 13	18 11 7	24 11 13	23 9 12

TABLE 1--Continued

Area.	Aggre- gate.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Greensburg, To.....	353	28	28	28	34	26	36	40	32	18	27	29	29
Greensburg, M.....	174	14	15	17	16	8	17	20	14	11	14	15	14
Greensburg, F.....	179	14	13	11	19	17	18	20	18	7	13	14	15
Greenville, To.....	166	13	3	17	15	17	8	12	12	16	16	14	16
Greenville, M.....	84	8	3	7	7	9	2	2	4	8	7	9	11
Greenville, F.....	84	5	7	10	8	8	6	7	8	8	9	5	5
Hanover, To.....	182	8	10	14	13	13	13	13	14	14	11	17	22
Hanover, M.....	87	5	4	7	7	6	8	9	6	10	5	9	14
Hanover, F.....	75	3	6	7	6	7	5	4	8	4	6	8	8
Harrisburg, To.....	1,378	124	97	104	115	121	122	113	125	119	122	97	118
Harrisburg, M.....	733	47	47	61	57	72	68	63	63	67	63	48	60
Harrisburg, F.....	655	60	50	43	58	49	64	50	63	52	59	49	58
Hazleton, To.....	808	73	69	83	65	71	64	63	65	62	69	61	73
Hazleton, M.....	431	44	41	48	37	37	33	24	32	22	34	40	40
Hazleton, F.....	377	29	28	42	28	34	31	29	33	22	29	39	39
Homestead, To.....	802	74	69	64	63	69	66	60	100	77	73	70	67
Homestead, M.....	390	29	31	25	22	31	23	15	44	44	44	32	31
Homestead, F.....	412	45	38	39	41	38	33	35	44	37	29	38	36
Huntingdon, To.....	120	10	7	9	11	5	14	8	15	16	5	8	17
Huntingdon, M.....	71	8	5	4	7	1	7	6	10	7	4	1	11
Huntingdon, F.....	49	2	2	5	4	4	7	3	5	9	1	1	6
Indiana, To.....	116	11	12	11	11	11	10	11	8	8	8	4	11
Indiana, M.....	61	6	5	6	8	6	3	5	4	4	4	3	4
Indiana, F.....	55	5	7	5	3	5	7	6	4	4	4	1	4
Jeannette, To.....	289	27	29	28	19	12	24	14	33	24	32	20	27
Jeannette, M.....	166	10	20	15	12	8	9	5	20	13	18	9	15
Jeannette, F.....	133	17	9	13	7	4	13	8	13	11	14	11	12
Jersey Shore, To.....	115	13	9	2	22	7	10	6	12	9	5	11	9
Jersey Shore, M.....	53	8	8	10	3	3	6	3	5	6	3	3	9
Jersey Shore, F.....	52	5	1	2	12	4	4	3	7	3	2	8	8
Johnstown, To.....	2,194	165	151	231	155	200	181	174	191	199	186	184	177
Johnstown, M.....	1,119	82	78	121	81	100	103	89	90	92	98	93	92
Johnstown, F.....	1,075	83	73	110	74	100	78	85	101	107	88	91	85

Junata,	To.,.....	215	14	21	19	12	21	16	22	19	16	12	19
	M.,.....	167	11	11	17	5	12	12	11	10	4	6	13
	F.,.....	106	3	10	7	7	9	11	11	9	12	6	6
Kane,	To.,.....	188	10	16	15	12	22	19	12	12	23	16	15
	M.,.....	88	7	6	4	6	12	10	5	8	12	6	5
	F.,.....	100	3	10	8	8	10	9	7	4	11	10	10
Kingston,	To.,.....	197	20	16	15	13	25	16	18	12	13	18	18
	M.,.....	96	10	11	6	5	13	10	9	4	10	7	7
	F.,.....	101	10	5	8	8	12	10	9	8	3	9	11
Kuoxville (Allegheny),	To.,.....	106	8	8	7	10	10	11	9	11	6	15	8
	M.,.....	62	4	2	4	4	6	5	4	10	4	9	6
	F.,.....	44	2	2	5	6	4	6	5	1	1	6	2
Lancaster,	To.,.....	1,086	83	99	90	87	77	92	105	90	104	62	88
	M.,.....	573	40	56	48	45	40	54	59	52	44	29	47
	F.,.....	513	43	43	42	42	37	46	46	38	60	33	39
Lansford,	To.,.....	370	28	40	29	30	19	30	30	31	85	32	27
	M.,.....	187	17	14	13	16	11	13	19	19	20	14	11
	F.,.....	183	11	26	16	14	8	17	11	12	15	19	16
Larksville,	To.,.....	968	21	28	31	25	30	20	27	20	53	12	13
	M.,.....	141	11	12	22	17	11	11	14	11	13	6	6
	F.,.....	127	10	16	9	12	9	9	13	9	10	6	7
Latrobe,	To.,.....	254	24	23	20	37	20	15	18	15	26	15	19
	M.,.....	146	14	16	12	25	10	10	10	8	10	8	11
	F.,.....	108	10	7	8	12	10	5	8	7	16	7	8
Lebanon,	To.,.....	434	40	38	34	37	31	40	43	38	47	31	28
	M.,.....	215	19	20	16	17	12	19	26	18	26	19	10
	F.,.....	219	21	18	18	20	19	21	17	20	21	12	18
Lehighton,	To.,.....	143	14	16	6	19	12	18	12	10	7	8	7
	M.,.....	77	5	9	3	9	8	11	7	4	3	3	3
	F.,.....	66	9	7	3	10	4	7	5	6	4	2	4
Lewistown,	To.,.....	189	15	21	18	19	12	8	15	6	25	12	16
	M.,.....	88	8	10	7	7	5	8	6	1	13	5	8
	F.,.....	101	7	11	11	12	7	7	9	5	12	7	8
Lock Haven,	To.,.....	156	12	15	18	12	8	10	11	14	14	14	12
	M.,.....	89	8	11	12	8	2	4	7	7	10	10	8
	F.,.....	67	4	8	6	6	6	6	4	7	4	4	9
Luzerne,	To.,.....	152	20	12	15	10	9	20	10	11	14	11	9
	M.,.....	79	11	7	6	6	5	11	8	4	5	4	4
	F.,.....	73	9	4	9	4	4	9	3	7	8	7	4

TABLE 1—Continued.

Area.	Aggre- gate.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
McKeesport,	To,..... M,..... F,.....	134 54 80	128 67 61	132 67 65	98 47 51	112 42 70	105 55 50	136 66 70	130 70 60	123 63 57	130 73 57	123 66 57	126 56
McKees Rocks,	To,..... M,..... F,.....	735 337	75 33 36	54 26 28	65 21 30	47 21 26	56 34 22	50 29 21	71 32 35	60 27 23	61 33 28	67 36 31	62 37 25
Mahanoy City,	To,..... M,..... F,.....	473 241	52 11 25	40 16 24	33 16 17	41 21 20	44 18 26	36 14 22	50 21 23	35 21 14	35 21 18	36 21 10	50 24 26
Meadville,	To,..... M,..... F,.....	289 154 135	17 7 10	31 19 12	29 10 13	23 11 11	19 11 8	22 10 12	32 15 17	34 22 12	27 21 6	20 11 9	15 9 6
Middletown,	To,..... M,..... F,.....	127 65 62	14 4 10	12 8 4	10 6 4	9 5 4	15 6 6	8 4 4	13 6 7	8 5 3	7 4 3	11 6 5	10 6 4
Millvale,	To,..... M,..... F,.....	199 106 38	11 10 8	24 13 12	18 8 10	8 7	14 5 8	15 10 10	14 6 8	23 16 7	19 12 7	12 6 6	16 12 4
Milton,	To,..... M,..... F,.....	175 87 88	19 5 5	11 9 6	17 9 8	8 5 3	15 6 9	13 6 7	17 8 9	15 8 8	13 7 5	24 9 15	13 9 4
Minersville,	To,..... M,..... F,.....	365 135 130	45 17 20	25 11 14	46 18 14	26 13 8	29 13 16	28 13 15	44 23 21	19 8 7	24 12 16	24 12 12	41 20 21
Monessen,	To,..... M,..... F,.....	730 388 332	52 27 18	35 23 12	46 22 14	64 35 35	58 28 30	79 48 31	64 32 32	61 35 27	82 34 47	66 37 37	63 29 34
Monongahela,	To,..... M,..... F,.....	243 120 123	18 9 9	25 15 10	22 11 11	14 9 5	19 12 10	18 9 6	13 10 8	23 11 12	26 13 13	15 6 9	26 12 14
Mount Carmel,	To,..... M,..... F,.....	585 327 298	55 34 23	55 25 30	50 23 22	51 23 23	50 23 27	49 23 24	49 30 19	55 23 15	44 23 21	46 20 26	32 19 13

Mount Pleasant,	To,..... M.,..... F.,.....	200 88 112	19 8 11	18 6 12	14 3 11	19 9 10	10 4 6	15 5 10	14 7 7	18 10 10	19 10 9	23 11 12	16 9 7	15 8 7
Munhall,	To,..... M.,..... F.,.....	223 114 119	18 9 9	21 10 12	20 10 10	12 5 7	18 6 11	24 11 13	15 7 8	32 13 19	17 10 7	16 9 7	19 10 10	21 10 11
Nanticoke,	To,..... M.,..... F.,.....	639 313 341	53 30 23	44 20 27	56 25 31	54 29 29	52 29 29	38 24 14	101 48 53	56 24 22	61 24 37	43 24 19	45 20 23	56 34 32
New Brighton,	To,..... M.,..... F.,.....	280 119 131	30 14 16	18 8 10	23 10 13	23 10 13	21 14 7	7 1 6	43 32 11	14 10 4	24 12 12	27 13 14	23 8 13	27 17 10
New Castle,	To,..... M.,..... F.,.....	1,242 656 586	120 51 69	100 51 49	137 77 60	83 39 44	91 51 40	84 53 31	116 82 67	87 47 40	107 59 48	107 55 52	88 57 81	122 67 55
New Kensington,	To,..... M.,..... F.,.....	416 199 217	26 13 13	38 21 17	29 18 21	38 26 20	33 17 16	35 17 18	33 14 19	45 20 25	32 16 16	39 18 26	25 13 12	33 19 14
Norristown,	To,..... M.,..... F.,.....	633 314 319	50 21 29	50 21 29	66 33 33	44 18 13	42 26 16	69 34 35	41 18 23	68 31 37	44 27 17	44 31 34	53 23 30	41 23 18
North Braddock,	To,..... M.,..... F.,.....	511 263 248	48 21 27	29 13 16	44 30 14	37 18 19	39 23 23	34 21 14	50 28 28	46 22 24	58 29 29	46 22 19	42 20 22	38 25 13
Northampton,	To,..... M.,..... F.,.....	400 197 203	41 23 18	29 9 12	28 16 19	33 16 17	37 13 24	30 16 14	42 22 20	32 20 12	39 16 23	24 13 13	34 21 21	31 21 10
Oil City,	To,..... M.,..... F.,.....	447 256 191	37 22 15	38 19 16	40 19 21	44 31 13	23 12 11	40 23 17	37 21 16	37 21 16	41 25 19	43 16 18	39 16 14	40 25 15
Old Forge,	To,..... M.,..... F.,.....	635 303 302	60 26 24	60 27 33	52 27 25	57 25 32	41 23 21	43 26 17	50 27 23	46 25 21	63 24 29	45 26 17	73 28 37	42 19 23
Olyphant,	To,..... M.,..... F.,.....	384 187 187	28 18 10	36 21 15	30 14 16	34 18 16	18 11 7	23 5 18	25 21 14	32 13 20	24 16 18	28 16 12	41 24 20	31 17 17
Philadelphia,	To,..... M.,..... F.,.....	41,080 21,103 19,977	3,627 1,842 1,785	2,725 1,438 1,287	3,712 1,836 1,826	3,266 1,640 1,626	3,315 1,701 1,614	3,587 1,833 1,701	3,661 1,876 1,785	3,578 1,833 1,745	3,465 1,806 1,659	3,482 1,795 1,686	3,859 1,723 1,624	3,903 1,679 1,624

TABLE 1—Continued.

Area.	Aggre- gate.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Phoenixville,	To,.....	31	28	26	18	23	22	32	33	28	31	32	35
	M.,.....	171	19	13	10	14	13	14	12	14	14	15	15
	F.,.....	153	11	13	8	9	9	13	21	14	13	16	9
Pittsburgh,	To,.....	1,327	1,239	1,454	1,217	1,318	1,352	1,473	1,409	1,340	1,372	1,391	1,372
	M.,.....	8,446	652	777	645	652	706	731	731	641	709	735	736
	F.,.....	7,881	587	677	572	666	646	736	673	689	689	686	688
Pittston,	To,.....	646	52	72	48	64	52	55	55	47	75	48	31
	M.,.....	316	29	64	24	23	24	30	23	23	23	20	13
	F.,.....	330	23	38	24	31	28	25	28	24	40	28	18
Plymouth,	To,.....	471	51	45	40	41	37	41	32	26	66	30	24
	M.,.....	260	26	26	20	23	20	20	18	13	42	15	13
	F.,.....	211	25	19	20	18	17	21	14	8	24	15	11
Pottstown,	To,.....	324	28	30	30	32	24	25	20	22	36	27	25
	M.,.....	188	18	18	18	18	15	15	8	6	13	18	18
	F.,.....	146	10	12	12	14	9	10	12	16	18	9	7
Pottsville,	To,.....	574	31	44	30	62	43	69	62	60	44	54	35
	M.,.....	312	18	22	19	30	23	39	36	34	26	33	16
	F.,.....	262	13	22	11	32	20	30	26	26	22	21	19
Punxsutawney,	To,.....	224	22	15	25	16	16	12	11	35	11	20	20
	M.,.....	107	7	10	14	9	7	2	7	22	4	6	10
	F.,.....	117	14	4	11	7	11	10	4	13	7	14	10
Rankin,	To,.....	377	23	36	29	29	29	42	22	27	32	34	36
	M.,.....	195	24	21	14	11	11	22	9	15	19	23	20
	F.,.....	181	14	15	15	18	18	20	13	12	12	11	16
Reading,	To,.....	2,514	183	235	183	216	207	216	232	198	196	193	231
	M.,.....	1,233	112	108	90	111	101	105	111	69	84	93	114
	F.,.....	1,231	109	127	93	105	106	111	115	106	102	100	120
Ridgway,	To,.....	148	14	11	9	15	12	8	12	13	13	13	10
	M.,.....	81	8	6	6	9	7	2	6	8	6	9	4
	F.,.....	67	6	6	6	6	6	6	6	5	7	4	6
Rochester,	To,.....	174	10	17	18	10	11	15	16	10	14	22	20
	M.,.....	88	8	11	11	5	6	7	7	7	5	11	6
	F.,.....	85	6	6	7	5	5	8	9	3	9	11	14

St. Clair (Allegheny),	To,.....	168	13	14	10	16	12	11	10	13	15	14	14	10	17
	M,.....	86	6	7	7	10	5	9	7	6	9	6	6	9	11
	F,.....	77	8	7	6	6	7	2	8	12	8	8	8	6	6
St. Clair (Schuylkil),	To,.....	277	14	28	19	18	22	18	19	29	33	23	23	33	58
	M,.....	155	8	14	11	11	13	13	11	15	14	14	14	20	13
	F,.....	122	8	14	8	7	9	6	8	14	13	9	9	13	13
St. Marys,	To,.....	222	12	12	22	15	20	17	19	20	19	16	16	19	22
	M,.....	134	7	8	31	9	13	9	10	10	10	11	11	10	10
	F,.....	88	5	4	22	6	7	8	9	6	9	5	5	9	6
Wayne,	To,.....	252	18	16	17	17	17	19	21	17	27	29	29	23	29
	M,.....	121	5	5	10	10	12	9	8	10	12	15	15	15	11
	F,.....	131	10	11	13	7	7	10	13	7	15	17	17	8	11
Scottdale,	To,.....	140	7	14	12	15	13	16	6	15	13	12	12	11	16
	M,.....	78	4	8	3	10	7	9	7	10	6	6	6	7	6
	F,.....	62	3	6	4	5	4	7	3	5	7	9	9	4	6
Seranton,	To,.....	3,847	318	271	344	335	361	311	311	335	361	362	362	302	346
	M,.....	2,080	169	145	196	184	189	166	166	184	189	183	183	173	184
	F,.....	1,767	149	126	148	151	162	145	145	151	162	135	135	145	162
Shamokin,	To,.....	707	62	47	65	56	52	55	56	63	52	64	64	64	69
	M,.....	358	28	26	33	27	28	33	27	29	28	28	28	32	37
	F,.....	349	34	21	32	29	24	22	29	34	24	36	36	32	32
Sharon,	To,.....	450	34	47	48	48	48	28	37	33	38	38	38	44	52
	M,.....	307	10	22	22	16	15	11	16	15	20	20	20	22	17
	F,.....	343	24	25	26	32	33	17	21	18	18	18	18	25	16
Sharpsburg,	To,.....	260	94	16	97	6	39	21	6	39	31	29	29	18	20
	M,.....	122	11	7	12	3	24	11	3	24	12	7	7	16	8
	F,.....	138	13	9	15	10	15	10	3	15	16	13	13	12	11
Shenandoah,	To,.....	1,000	69	88	79	88	86	91	82	88	86	94	91	70	73
	M,.....	511	36	45	45	46	45	48	46	54	54	54	54	30	39
	F,.....	489	33	43	34	37	37	43	37	33	37	40	44	40	34
South Bethlehem (Northampton),	To,.....	1,023	69	67	96	105	88	76	105	88	76	89	89	88	97
	M,.....	551	44	35	51	41	41	41	40	40	43	43	43	44	53
	F,.....	472	25	32	45	35	35	35	64	48	33	37	46	39	44
Steelton,	To,.....	420	38	45	41	34	23	34	34	23	29	33	33	36	37
	M,.....	246	18	23	22	21	16	14	14	21	21	23	23	26	17
	F,.....	174	20	22	19	13	18	9	9	8	8	18	10	14	11
Sanbury,	To,.....	350	39	26	26	21	27	25	21	27	30	28	28	30	29
	M,.....	174	16	16	11	12	14	16	12	14	16	12	14	15	15
	F,.....	176	23	10	15	13	15	13	7	14	14	14	14	15	16

TABLE 1—Continued.

Area.	Aggre- gate.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Swissvale,	To,.....	15	19	21	14	18	37	26	21	19	27	18	14
	M.,.....	5	9	14	11	7	22	10	14	8	11	7	9
	F.,.....	10	10	7	8	11	14	16	17	11	16	11	5
Swoyersville,	To,.....	21	35	27	29	26	11	29	24	22	30	21	19
	M.,.....	12	13	16	17	17	4	18	13	12	14	12	11
	F.,.....	9	23	11	12	9	7	11	11	10	16	9	8
Tamaqua,	To,.....	24	23	36	28	23	18	33	25	24	23	31	29
	M.,.....	16	10	18	17	14	11	17	17	12	13	21	14
	F.,.....	18	13	18	11	7	7	16	8	12	10	10	6
Tarentum,	To,.....	10	23	22	22	14	17	19	13	25	29	18	22
	M.,.....	4	16	11	13	7	8	12	8	11	11	7	14
	F.,.....	6	13	11	9	7	9	7	5	14	9	11	8
Taylor,	To,.....	39	27	41	30	31	32	32	38	27	27	25	30
	M.,.....	20	14	19	18	13	18	21	21	17	18	13	22
	F.,.....	19	13	32	12	18	14	11	17	11	9	12	8
Throop,	To,.....	17	15	24	12	25	13	12	30	17	25	22	18
	M.,.....	8	9	9	7	5	5	4	18	8	8	11	10
	F.,.....	9	6	15	5	20	8	8	12	9	14	10	8
Titusville,	To,.....	9	18	13	15	15	18	13	7	10	8	14	9
	M.,.....	5	14	6	10	7	7	5	3	4	4	6	6
	F.,.....	6	4	7	5	3	11	8	4	6	4	4	3
Tyrone,	To,.....	20	18	25	17	18	15	17	16	27	16	18	11
	M.,.....	12	9	14	11	10	11	11	7	13	13	8	8
	F.,.....	8	9	11	6	8	9	9	9	14	8	10	8
Uniontown (Fayette),	To,.....	42	34	29	32	26	35	28	38	34	41	32	29
	M.,.....	23	20	21	17	15	24	23	23	15	15	15	16
	F.,.....	20	14	8	15	11	11	14	14	13	17	17	13
Warren,	To,.....	12	27	34	23	36	18	33	18	28	13	20	17
	M.,.....	4	14	23	12	10	10	17	8	11	6	10	8
	F.,.....	8	13	11	10	19	8	16	10	17	7	10	9
Washington,	To,.....	46	39	54	26	41	41	37	51	40	34	36	46
	M.,.....	16	21	30	10	19	18	20	17	24	17	23	23
	F.,.....	30	18	24	16	22	23	17	17	26	16	13	18

Waynesboro,	To,..... M,..... F,.....	166 53 73	18 10 8	13 9 4	17 11 6	5 6 3	16 8 3	13 9 8	15 8 7	12 6 6	11 7 4	16 7 9
West Berwick,	To,..... M,..... F,.....	240 113 117	23 16 7	14 7 7	20 11 9	17 16 10	22 16 14	21 11 13	15 7 8	6 6 9	25 12 13	22 14 8
West Chester,	To,..... M,..... F,.....	276 139 137	22 16 14	20 12 8	23 8 15	29 12 17	20 12 8	25 14 11	23 16 7	18 11 6	28 12 17	25 13 13
West Pittston,	To,..... M,..... F,.....	136 69 67	12 7 5	7 3 4	11 6 5	14 6 8	8 6 2	16 7 9	10 6 4	13 7 6	9 4 5	10 4 6
Wilkes-Barre,	To,..... M,..... F,.....	2,125 1,082 1,043	192 100 92	160 73 87	186 94 92	160 82 78	163 73 80	162 94 72	189 86 102	187 104 79	149 83 68	202 105 97
Wilkesburg,	To,..... M,..... F,.....	583 306 277	47 22 25	41 21 20	53 31 22	41 32 19	43 24 19	41 24 17	53 24 19	57 21 36	45 23 22	60 16 24
Williamsport,	To,..... M,..... F,.....	686 343 353	50 25 25	73 34 39	69 39 30	51 27 24	33 14 19	81 37 42	63 28 35	69 24 22	49 23 26	60 28 32
Wilmington,	To,..... M,..... F,.....	225 120 115	24 14 10	16 6 10	15 9 6	21 10 11	19 13 6	18 12 6	23 13 16	24 15 10	21 9 8	14 9 11
Windler,	To,..... M,..... F,.....	568 266 242	55 27 28	44 21 23	41 21 20	38 23 15	46 21 25	36 18 18	37 20 17	34 15 21	44 24 22	51 23 18
Winton,	To,..... M,..... F,.....	351 166 188	42 21 21	24 7 17	28 9 19	38 16 20	30 16 14	29 11 12	30 12 18	33 11 14	28 15 13	33 15 18
York,	To,..... M,..... F,.....	922 482 440	74 43 31	90 48 42	87 51 36	62 31 28	62 37 29	90 45 45	70 39 34	62 37 33	58 42 41	73 40 38
Counties (Rural, Exclusive of all Municipalities).												
Adams,	To,..... M,..... F,.....	550 294 256	42 20 22	47 27 20	74 38 36	35 18 17	55 35 20	38 16 20	42 24 20	41 14 20	29 21 18	49 35 14

TABLE 1—Continued.

Area.	Aggre- gate.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	
														To.
Allegheny,	To.	444	398	511	397	406	398	484	447	492	417	449	446	
	M.	229	210	266	205	207	205	233	216	248	214	210	232	
	F.	215	188	245	192	199	188	251	231	244	208	239	214	
Armstrong,	To.	114	109	115	105	91	115	107	98	109	124	111	119	
	M.	56	66	51	50	47	61	46	63	61	60	66	60	
	F.	58	43	64	55	44	54	61	35	48	64	45	59	
Beaver,	To.	51	54	57	84	55	36	47	46	47	50	59	43	
	M.	29	34	34	20	27	15	27	20	22	22	31	20	
	F.	22	24	23	14	28	21	20	26	26	28	28	22	
Bedford,	To.	756	78	62	67	53	59	65	72	57	61	52	54	
	M.	41	24	32	32	30	32	35	37	23	23	24	30	
	F.	378	40	30	35	23	27	30	35	34	33	28	24	
Berks,	To.	1,641	110	164	129	149	128	135	131	134	158	143	117	
	M.	58	55	84	66	68	65	69	80	67	82	72	51	
	F.	824	55	80	63	81	68	66	51	67	76	71	66	
Blair,	To.	852	71	65	77	61	76	73	76	64	74	66	76	
	M.	38	35	27	44	28	40	40	48	31	46	39	37	
	F.	404	37	39	33	33	36	33	38	33	28	27	39	
Bradford,	To.	619	47	45	54	50	45	55	46	59	69	41	58	
	M.	314	28	23	36	19	20	30	18	26	35	22	29	
	F.	305	19	22	18	31	25	25	25	28	34	19	29	
Bucks,	To.	979	68	76	73	87	99	90	93	74	69	99	61	
	M.	515	39	52	37	41	44	53	47	45	33	33	35	
	F.	464	29	39	32	48	46	43	48	41	36	43	26	
Butler,	To.	1,074	76	96	99	96	81	100	93	100	82	87	96	
	M.	592	41	38	54	53	35	61	52	52	60	57	51	
	F.	482	35	30	45	43	46	39	41	40	39	30	45	
Cambria,	To.	2,552	190	218	222	212	196	226	254	199	200	226	270	
	M.	376	34	118	116	108	102	131	147	110	115	118	116	
	F.	1,206	96	109	112	104	94	95	107	137	89	108	104	
Cameron,	To.	55	1	8	2	3	4	5	8	3	5	2	7	
	M.	30	1	1	2	1	2	1	6	2	2	3	3	
	F.	25	1	5	1	2	2	1	2	1	3	2	4	

Carbon,	To,.....	57	29	62	56	61	58	62
	M.,.....	27	22	21	29	27	27	29
	F.,.....	30	17	28	27	32	29	33
Centre,	To,.....	56	57	69	55	64	72	56
	M.,.....	29	27	35	29	31	29	26
	F.,.....	33	30	34	31	33	43	32
Chester,	To,.....	83	100	92	91	83	115	90
	M.,.....	45	51	55	48	50	57	52
	F.,.....	38	49	37	44	41	61	45
Clarion,	To,.....	44	38	54	52	38	65	51
	M.,.....	15	20	25	21	19	27	21
	F.,.....	21	18	27	33	19	39	25
Clearfield,	To,.....	139	144	173	167	181	188	158
	M.,.....	79	88	83	88	96	87	81
	F.,.....	60	76	90	79	88	77	72
Clinton,	To,.....	29	28	29	30	20	27	21
	M.,.....	13	15	14	12	14	9	9
	F.,.....	16	13	15	18	8	6	14
Columbia,	To,.....	42	47	42	48	41	44	41
	M.,.....	23	23	26	21	23	26	28
	F.,.....	19	21	16	27	18	18	17
Crawford,	To,.....	32	50	48	49	33	41	51
	M.,.....	15	25	30	30	18	30	23
	F.,.....	18	27	18	19	23	26	15
Cumberland,	To,.....	49	52	63	55	53	62	51
	M.,.....	23	25	22	23	30	27	26
	F.,.....	26	27	31	20	26	27	21
Dauphin,	To,.....	80	73	79	83	71	62	70
	M.,.....	47	37	39	41	37	50	55
	F.,.....	33	38	40	42	31	35	34
Delaware,	To,.....	48	66	72	51	67	62	50
	M.,.....	25	33	33	34	29	23	29
	F.,.....	23	37	39	20	32	32	27
Elk,	To,.....	46	42	44	47	36	47	42
	M.,.....	24	18	22	19	12	26	24
	F.,.....	22	21	22	28	24	22	23
Erie,	To,.....	56	47	69	71	62	56	63
	M.,.....	29	21	36	37	31	22	19
	F.,.....	21	21	28	28	21	17	27

TABLE 1—Continued.

Area.	Aggre- gate.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Fayette,	To,..... M.,..... F.,.....	292 126 134 151	313 257 254 156	345 171 174	286 146 140	297 163 163	297 156 151	276 133 141	343 181 162	329 181 163	314 160 154	323 165 158	295 159 136
Forest,	To,..... M.,..... F.,.....	19 8 11	19 13 6	17 6 11	22 14 8	4 4 4	16 10 6	9 2 6	16 9 7	14 9 6	18 10 8	12 15 8	14 11 3
Franklin,	To,..... M.,..... F.,.....	945 203 442	60 37 23	73 48 28	98 53 45	88 43 45	70 44 26	63 25 33	89 37 45	95 50 45	75 42 39	83 42 41	74 40 34
Fulton,	To,..... M.,..... F.,.....	192 6 6	17 6 11	14 5 9	18 9 9	16 10 6	17 9 8	11 2 9	13 7 6	20 9 11	18 6 12	21 8 13	15 5 10
Greene,	To,..... M.,..... F.,.....	393 203 190	33 20 13	29 15 17	24 14 10	27 15 13	25 14 10	29 17 12	47 25 22	48 26 22	35 15 20	35 19 16	23 42 17
Huntington,	To,..... M.,..... F.,.....	462 255 207	42 29 22	44 31 17	36 24 12	47 22 25	33 18 15	40 28 22	38 20 18	39 21 18	37 20 17	25 14 11	37 20 17
Indiana,	To,..... M.,..... F.,.....	1,763 927 836	181 72 59	181 75 76	151 76 75	159 88 71	150 75 75	138 75 63	160 89 71	142 69 73	151 71 80	139 66 73	154 90 64
Jefferson,	To,..... M.,..... F.,.....	1,220 694 616	102 66 52	99 47 52	107 58 49	92 42 50	83 44 50	109 44 54	109 53 51	106 45 61	105 43 62	91 47 44	113 53 55
Juniata,	To,..... M.,..... F.,.....	241 131 110	26 14 10	30 10 9	25 10 15	14 3 11	14 7 7	23 20 13	15 8 7	23 14 12	16 7 7	17 12 5	16 8 8
Lackawanna,	To,..... M.,..... F.,.....	630 329 301	56 26 30	47 24 26	49 22 27	41 24 17	52 32 20	59 33 20	69 33 31	45 19 26	48 20 25	51 32 19	58 30 23
Lancaster,	To,..... M.,..... F.,.....	2,045 1,063 982	147 80 68	158 80 78	188 92 96	195 103 92	170 87 81	187 106 81	165 90 75	191 90 101	169 89 89	151 66 85	153 92 61

Lawrence,	T _o	726	62	71	69	55	64	61	72	58	65	64	55	40
	M.....	473	31	46	38	28	25	28	39	32	30	31	28	20
	F.....	359	31	29	31	30	39	33	33	26	30	33	37	20
Lebanon,	T _o	858	70	46	83	63	67	61	63	79	82	89	89	75
	M.....	470	40	28	36	28	36	29	32	39	48	43	43	44
	F.....	388	30	18	36	27	31	32	31	40	34	41	37	31
Lehigh,	T _o	957	81	77	83	75	79	79	79	78	87	74	82	93
	M.....	495	40	44	56	39	40	47	35	35	41	30	41	46
	F.....	472	41	33	37	36	39	32	44	42	46	34	41	47
Luzerne,	T _o	745	225	218	277	195	227	214	214	231	226	242	219	220
	M.....	1,404	109	117	134	107	116	113	108	123	198	156	120	123
	F.....	341	116	101	143	88	111	101	133	108	118	116	59	107
Lycorning,	T _o	554	37	33	42	40	43	56	62	45	51	47	41	48
	M.....	287	17	24	21	20	24	24	31	21	24	28	20	27
	F.....	267	20	15	21	20	19	32	28	24	24	19	24	21
McKeon,	T _o	373	27	34	44	31	15	24	28	32	37	42	29	29
	M.....	186	12	16	23	16	8	13	11	11	11	22	20	14
	F.....	187	15	18	21	15	7	11	17	16	16	17	18	16
Mercer,	T _o	571	51	61	30	52	55	45	51	43	49	42	48	44
	M.....	308	30	31	13	28	28	26	26	23	29	23	27	25
	F.....	263	21	30	17	24	27	20	25	20	20	19	21	19
Mifflin,	T _o	446	44	81	45	34	43	28	29	35	41	34	43	26
	M.....	218	13	15	19	19	21	12	13	11	22	18	22	18
	F.....	228	23	19	20	15	22	16	16	21	19	16	21	18
Monroe,	T _o	994	20	25	22	15	28	21	24	27	27	24	28	33
	M.....	120	14	11	11	8	15	7	10	13	17	12	13	15
	F.....	159	16	14	11	7	13	14	14	14	10	12	15	15
Montgomery,	T _o	1,819	140	116	178	128	153	161	161	195	138	189	116	141
	M.....	831	71	65	94	63	88	76	80	92	77	107	50	70
	F.....	888	69	51	84	65	65	85	84	103	61	84	66	71
Monmouth,	T _o	135	9	14	11	13	10	7	7	7	20	8	12	17
	M.....	70	6	6	6	6	6	2	6	2	12	8	8	6
	F.....	65	7	8	5	7	4	5	1	5	8	.....	4	11
Northampton,	T _o	973	76	83	90	67	78	88	104	82	102	61	78	63
	M.....	521	31	47	52	29	40	45	57	54	53	29	28	34
	F.....	452	42	36	38	28	38	43	47	31	48	32	40	29
Northumberland,	T _o	1,512	146	135	134	131	142	118	127	126	117	120	109	127
	M.....	899	70	73	65	76	76	62	60	61	63	72	57	63
	F.....	732	76	62	69	47	66	56	67	62	54	48	52	74

TABLE 1—Continued.

Area.	Aggre- gate.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Perry,	To.....	27	25	31	25	24	25	27	25	43	31	27	25
	M.....	13	11	17	13	5	11	18	18	17	11	15	14
	F.....	14	11	14	12	19	14	9	7	26	20	12	11
Pike,	To.....	3	4	10	7	7	8	5	5	9	2	9	5
	M.....	3	1	3	4	5	4	3	1	5	2	2	3
	F.....	.....	3	7	3	4	4	2	4	4	.....	7	2
Potter,	To.....	27	27	22	15	24	27	25	25	25	20	27	15
	M.....	14	14	9	4	15	11	14	14	13	13	13	8
	F.....	12	12	13	11	9	16	11	9	12	7	6	7
Schnykill,	To.....	154	155	133	167	175	159	165	186	177	181	157	162
	M.....	84	84	76	76	87	83	83	103	75	83	90	70
	F.....	80	88	99	91	88	76	82	88	102	91	87	79
Snyder,	To.....	26	43	15	36	30	28	22	22	43	20	25	22
	M.....	18	18	4	21	15	15	13	15	24	12	13	16
	F.....	8	18	11	15	15	13	13	15	24	12	15	6
Somerset,	To.....	94	115	130	122	97	103	107	120	130	114	106	120
	M.....	48	59	62	63	51	51	58	71	66	63	66	69
	F.....	46	56	68	59	46	45	45	49	64	51	40	51
Sullivan,	To.....	27	20	20	17	25	26	22	19	30	28	17	22
	M.....	10	8	9	9	12	17	12	10	13	16	6	8
	F.....	13	11	11	8	13	9	10	10	17	12	12	14
Susquehanna,	To.....	25	33	30	26	25	33	45	26	30	36	30	27
	M.....	17	17	11	15	15	16	22	24	20	22	13	13
	F.....	14	16	19	12	10	17	17	13	10	14	17	14
Tioga,	To.....	40	46	42	37	56	45	61	44	46	37	41	35
	M.....	16	20	19	16	26	27	31	25	27	27	22	13
	F.....	24	26	23	21	30	18	18	19	19	26	19	22
Union,	To.....	8	18	21	23	21	21	19	23	12	19	13	13
	M.....	5	10	14	14	11	13	8	10	4	7	4	8
	F.....	3	8	7	9	10	8	11	13	7	12	9	5
Venango,	To.....	37	36	39	42	32	24	32	44	37	43	53	33
	M.....	16	19	23	21	18	14	23	26	25	18	25	9
	F.....	21	17	11	21	14	10	9	18	19	19	19	24

Warren,	Tot.....	383	21	38	41	33	33	33	33	31	32	35	40	25
	M.....	214	12	23	18	16	16	16	16	12	13	13	20	9
	F.....	169	9	15	22	17	17	17	17	19	19	22	20	16
Washington,	Tot.....	2,120	182	188	196	177	178	201	201	198	195	156	179	170
	M.....	1,123	90	103	95	84	105	96	82	103	96	71	102	95
	F.....	997	92	85	101	93	73	108	108	95	99	85	77	75
Wayne,	Tot.....	447	40	34	26	37	34	23	23	25	61	31	41	31
	M.....	227	17	20	19	17	18	18	18	19	34	19	19	14
	F.....	220	23	14	7	20	16	15	15	13	27	12	22	17
Westmoreland,	Tot.....	4,068	322	322	306	338	304	345	309	295	356	364	317	312
	M.....	2,114	169	176	203	160	155	180	157	171	202	186	183	160
	F.....	1,954	153	146	193	178	149	153	152	122	154	178	164	152
Wyoming,	Tot.....	224	15	19	26	15	21	22	19	19	20	16	11	27
	M.....	119	6	11	10	8	9	17	9	8	14	9	3	15
	F.....	105	9	8	16	7	12	5	10	11	6	7	8	12
York,	Tot.....	1,407	121	124	128	143	110	123	114	106	148	105	127	118
	M.....	751	65	71	58	75	60	68	53	49	77	49	67	50
	F.....	716	56	53	70	68	50	55	61	57	71	56	60	59

BIRTH TABLE 2.

Births for the Entire State, for all Municipalities Having More Than 5,000 Population, for all Municipalities Having Less Than 5,000 Population, and for the Rural Sections of Each County, Exclusive of all Municipalities; by Age and Nativity of Mother. (Still-births Excluded.)

Age of Mother.	Entire State.			Municipalities of 5,000 or Over.			Municipalities Under 5,000.			Rural, Exclusive of all Municipalities.			
	Total.	Native.	Foreign.	Unstated.	Native.	Foreign.	Unstated.	Native.	Foreign.	Unstated.	Native.	Foreign.	Unstated.
All ages,	539,542												
Under 15 years,	38	83	10	.....	47	2,756	7	.....	1	.....	28	.....
15-19 years,	13,597	13,881	4,704	.....	7,065	17,881	.....	.....	691	.....	4,947	.....
20-24 years,	64,141	41,068	23,072	31	22,829	17,481	18	.....	2,641	.....	12,753	.....
25-29 years,	59,475	31,169	24,311	52	18,869	16,186	38	.....	2,641	.....	12,753	.....
30-34 years,	49,702	24,862	16,315	20	17,975	10,743	20	.....	1,898	.....	11,014	.....
35-39 years,	28,038	14,846	10,350	20	11,111	6,636	12	.....	1,182	.....	8,237	.....
40-44 years,	9,833	5,598	3,574	9	2,440	2,238	5	.....	386	.....	5,529	.....
45-49 years,	827	463	333	.....	180	241	.....	.....	47	.....	2,304	.....
50 years and over,	27	15	11	.....	7	6	.....	.....	.....	.....	201	.....
Age unstated,	1,416	762	613	41	424	394	27	.....	60	.....	247	.....

BIRTH TABLE 5.

Plural and Illegitimate Births for the Entire State and for Certain Sub-divisions of the Same, by Nativity of Mothers. (Stillbirths Excluded.)

Area.	Nativity.	Twins.	Triples.	Illegitimate.
	Total,	2,469	19	4,091
Entire State,	Native,	1,412	8	3,451
	Foreign,	986	11	529
	Unstated,	11	.....	18
	Total,	1,303	14	2,537
All municipalities over 5,000 population,	Native,	683	6	2,116
	Foreign,	618	8	411
	Unstated,	2	.....	10
	Total,	302	1	306
All municipalities under 5,000 population,	Native,	517	1	285
	Foreign,	85	.....	21
	Unstated, .....	.....	.....	.....
	Total,	804	4	1,178
Rural, exclusive of all municipalities,	Native,	512	1	1,053
	Foreign,	283	3	97
	Unstated,	9	.....	8



MORBIDITY STATISTICS.



COMMUNICABLE DISEASES.

A total of 140,682 cases of communicable diseases was reported during the year, a decrease of 54,333 as compared with the previous year. A large proportion of this decrease is found in measles. Chicken pox, German measles, mumps, whooping cough show an increase over the previous year, but on the other hand measles declined 66,376 cases.

In many of the tables which follow the reports of communicable diseases are grouped under "urban" and "rural." As urban are classed all reports received from incorporated municipalities irrespective of the number of inhabitants.

MORBIDITY TABLE 1.

TOTAL CASES OF COMMUNICABLE DISEASES REPORTED DURING THE YEARS 1906-1914, INCLUSIVE.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
Total,	<u>88,320</u>	<u>70,864</u>	<u>113,826</u>	<u>119,903</u>	<u>141,789</u>	<u>122,723</u>	<u>140,158</u>	<u>195,015</u>	<u>140,682</u>
Actinomycosis,	1	2	.....	3	.....	.....	.....	5	1
Anterior poliomye- litis,* .....	.....	.....	.....	.....	1,112	177	267	141	113
Anthrax,	23	26	19	16	19	7	17	29	20
Cerebrospinal fever,	361	430	215	130	149	136	160	155	160
Chicken pox,	2,999	3,442	5,640	8,341	6,545	8,934	12,603	13,055	16,475
Diphtheria,	10,870	10,510	12,509	13,133	14,061	16,096	16,617	16,864	16,070
Epidemic dysentery,	5	3	.....	12	19	230	16	18	45
Erysipelas,	1,012	972	1,095	1,473	1,627	1,663	1,548	1,936	2,250
German measles,.....	404	100	477	1,145	1,605	409	769	2,575	5,912
Glanders, .....	.....	.....	1	1	.....	2	3	2	.....
Impetigo contagi- osa,§ .....	.....	.....	.....	.....	.....	.....	.....	36	915
Leprosy, .....	.....	.....	1	1	.....	3	4	.....	2
Malarial fever,.....	99	81	87	83	69	69	146	95	49
Measles,	23,729	11,776	37,981	34,925	49,786	33,507	49,967	92,651	26,275
Mumps,	1,337	1,115	2,548	3,829	6,775	5,255	7,080	7,913	9,113
Ophthalmia neona- torum,§ .....	.....	.....	.....	.....	.....	.....	.....	11	186
Pellagra,* .....	.....	.....	.....	.....	.....	8	1	5	2
Pneumonia (true), ..	6,169	5,232	6,285	7,148	7,975	6,336	5,962	6,076	5,421
Puerperal fever, ...	77	57	97	69	92	80	50	52	50
Rabies,	8	5	8	8	12	6	2	5	18
Scabies,§ .....	.....	.....	.....	.....	.....	.....	.....	14	639
Scarlet fever,	7,670	7,699	14,413	15,536	12,931	10,332	10,963	15,434	17,190
Smallpox,	73	62	77	45	163	159	501	798	743
Tetanus,	65	74	85	98	116	77	87	94	75
Trachoma,	23	26	74	77	321	95	47	95	230
Trichiniasis,	1	.....	2	.....	3	6	10	1	7
Tuberculosis,	5,284	6,109	10,418	14,646	14,572	14,526	13,064	12,830	13,432
Typhoid fever,	24,471	20,080	15,157	11,842	13,835	11,803	9,676	10,520	7,653
Typhus fever, .....	.....	.....	.....	.....	.....	.....	.....	1	1
Uncinariasis,* .....	.....	.....	.....	.....	.....	7	.....	.....	.....
Whooping cough, ..	3,691	3,013	6,637	7,337	9,897	12,436	10,578	13,604	17,641

*Made reportable in 1910.

§Made reportable in 1913.

MORBIDITY TABLE 2. Communicable Diseases Reported in 1914, by Months:—Total, Urban, and Rural

Area.	Aggre- gate.	1914												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Un.
Total.	Total.	15,890	14,321	18,929	17,740	13,443	9,333	6,759	5,497	7,102	9,072	10,363	11,908	
	Urban.	10,974	11,036	14,611	13,385	10,586	7,567	4,786	3,540	4,629	6,460	7,940	9,019	
	Rural.	4,916	3,285	4,318	4,355	2,857	2,426	1,973	1,957	2,473	2,612	2,423	2,889	
Actinomycosis.	Total.	1	1	1	1	1	1	1	1	1	1	1	1	
	Urban.	1	1	1	1	1	1	1	1	1	1	1	1	
Anterior poliomyelitis.	Total.	113	3	4	3	2	3	14	22	29	27	8	1	
	Urban.	71	1	3	2	2	2	11	16	15	19	4	4	
	Rural.	42	2	1	1	1	1	3	12	5	8	4	5	
Anthrax.	Total.	29	2	3	2	3	2	1	1	3	1	1	2	
	Urban.	15	1	2	1	2	1	1	1	2	2	1	1	
	Rural.	5	1	1	1	1	1	1	1	1	1	1	1	
Cerebrospinal meningitis.	Total.	169	15	27	25	15	17	6	11	11	9	8	8	
	Urban.	108	8	19	17	9	9	4	9	9	6	6	7	
	Rural.	52	7	8	9	6	8	2	2	2	3	2	1	
Chicken pox.	Total.	16,475	2,284	2,265	1,713	1,059	759	312	162	201	823	1,548	2,632	
	Urban.	13,077	2,458	1,865	1,176	911	617	255	74	139	645	1,411	2,069	
	Rural.	3,406	726	411	537	148	133	57	29	71	178	137	563	
Diphtheria.	Total.	16,070	1,546	1,104	1,005	776	872	820	812	1,504	2,111	2,294	1,994	
	Urban.	11,537	1,070	827	809	612	614	566	531	1,066	1,487	1,648	1,766	
	Rural.	4,473	476	277	226	163	228	254	281	438	624	646	228	
Epidemic dysentery.	Total.	45	1	1	1	1	1	1	1	21	21	10	1	
	Urban.	36	1	1	1	1	1	1	1	15	20	8	1	
	Rural.	9	1	1	1	1	1	1	1	6	1	2	1	
Erysipelas.	Total.	2,250	243	354	302	219	137	115	73	60	106	158	217	
	Urban.	1,867	207	290	252	178	117	87	54	47	89	137	189	
	Rural.	383	36	67	60	41	27	28	19	13	17	21	28	
German measles.	Total.	5,912	228	650	1,856	948	296	54	27	22	35	43	48	
	Urban.	4,812	159	593	1,436	738	215	31	19	13	24	37	39	
	Rural.	1,100	69	292	429	210	80	23	8	10	11	6	9	

Scabies,	{ Total,	47	75	57	86	33	10	8	65	77	69	69
	{ Urban,	38	71	57	85	32	10	8	63	77	66	69
Scarlet fever,	{ Total,	1,965	2,540	1,978	1,511	1,113	605	588	797	1,246	1,442	1,369
	{ Urban,	1,500	1,914	1,488	1,241	814	502	484	610	952	1,169	1,071
	{ Rural,	465	596	430	293	228	167	194	137	294	342	332
Smallpox,	{ Total,	127	86	73	61	77	19	23	3	3	20	37
	{ Urban,	111	33	15	36	18	2	9	1	1	9	19
	{ Rural,	16	53	58	25	59	17	22	2	2	11	18
Tetanus,	{ Total,	8	3	4	3	12	6	8	9	10	2	8
	{ Urban,	7	2	4	2	9	2	8	7	7	.....	6
	{ Rural,	1	1	.....	1	3	4	.....	2	3	.....	2
Trachoma,	{ Total,	230	23	57	20	6	4	16	25	51	10	10
	{ Urban,	175	6	57	19	6	3	8	13	25	7	7
	{ Rural,	55	.....	.....	1	.....	1	8	12	26	3	3
Trichiniasis,	{ Total,	7	2	.....	1	.....	.....	.....	.....	.....	.....	.....
	{ Urban,	5	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
	{ Rural,	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuberculosis,	{ Total,	13,432	1,306	1,316	1,267	1,399	1,214	1,030	929	1,106	907	973
	{ Urban,	11,993	1,181	1,189	1,153	1,137	1,078	890	819	886	816	875
	{ Rural,	1,439	125	127	114	262	136	140	110	120	91	98
Typhoid fever,	{ Total,	7,653	390	326	371	362	547	909	1,371	1,148	768	536
	{ Urban,	4,811	256	221	230	236	359	589	851	706	480	387
	{ Rural,	2,842	135	105	141	126	188	370	520	442	288	149
Typhus fever,	{ Total,	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
	{ Urban, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	{ Rural, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping cough,	{ Total,	17,641	2,381	2,206	2,354	1,663	1,408	1,154	1,010	556	601	617
	{ Urban,	10,928	1,967	1,888	1,961	1,063	812	645	412	278	315	332
	{ Rural,	6,703	521	717	393	570	536	609	638	288	286	313

MORBIDITY TABLE 3.
TYPHOID FEVER.

Comparison of Cases Reported by Months for the Years 1906-1914, Inclusive.

	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	Total. 1914.	Urban. 1914.	Rural. 1914.
Total,	24,471	26,080	15,157	11,842	13,835	11,803	9,676	10,520	7,653	4,811	2,842
January,	2,177	3,099	1,652	939	825	881	894	674	524	265	259
February,	2,286	2,206	1,204	852	644	1,173	575	580	390	281	109
March,	1,870	1,178	970	692	642	696	806	361	401	256	145
April,	2,122	1,126	838	475	549	528	437	459	326	221	105
May,	1,829	999	583	661	498	481	513	538	371	230	141
June,	1,198	1,045	619	515	423	454	468	567	362	236	126
July,	1,404	1,092	945	909	780	721	658	835	547	359	178
August,	2,026	1,849	1,708	1,544	1,918	1,414	1,156	1,394	909	539	370
September,	2,342	1,967	2,386	2,014	2,648	1,860	1,027	1,840	1,371	851	520
October,	2,396	2,123	1,702	1,557	2,381	1,586	1,658	1,600	1,148	706	442
November,	1,894	1,830	1,406	1,002	1,510	1,019	834	959	768	480	288
December,	2,927	1,566	1,144	682	1,017	990	650	713	536	387	149

MORBIDITY TABLE 4.

Distribution of Typhoid Fever Reported in 1914, by Age Periods, State, Urban and Rural, and Percentages at Each Age to Total Cases of Each Locality.

	Total State.		Urban.		Rural.	
	Cases.	Per cent.	Cases.	Per cent.	Cases.	Per cent.
All ages,	7,653	.....	4,811	.....	2,842	.....
Under 5 years,	256	4.6	224	4.6	132	4.6
5-9 years,	1,126	14.7	719	14.9	407	14.3
10-14 years,	1,074	14.0	646	13.4	428	15.1
15-19 years,	1,135	14.8	689	14.3	446	15.7
20-24 years,	1,198	15.6	792	16.5	406	14.3
25-29 years,	807	10.5	547	11.4	260	9.1
30-34 years,	551	7.2	357	7.4	194	6.8
35-39 years,	422	5.5	267	5.5	155	5.4
40-44 years,	290	3.8	178	3.7	112	3.9
45-49 years,	216	2.8	131	2.7	85	3.0
50-54 years,	141	1.8	72	1.5	69	2.4
55-59 years,	106	1.4	58	1.2	48	1.7
60 years and over,	136	1.8	79	1.6	57	2.0
Age un stated,	95	1.2	52	1.1	43	1.5

MORBIDITY TABLE 5.

Typhoid Fever by Nativity and Age Periods.

	Total all ages.	Under 5.	5-9.	10-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80 and over.	Un-stated.
Total,	7,653	356	1,126	2,299	2,065	973	506	247	106	29	1	95
Native,	6,501	298	1,024	1,929	1,568	787	415	233	91	26	1	79
Foreign,	846	31	56	168	350	157	41	19	9	9	.....	.....
Unstated,	312	17	36	102	87	29	20	5	6	1	.....	.....

MORBIDITY TABLE 6.

Typhoid Fever by Color and Age Periods.

	All ages.	Under 5.	5-9.	10-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70 and over.	Un-stated.
Total,	7,653	356	1,126	2,299	2,005	973	506	247	106	30	96
White,	7,539	349	1,101	2,178	1,979	963	497	245	106	30	91
Black,	108	7	24	31	26	10	8	1	.....	.....	.....
Unstated,	6	1	1	.....	.....	.....	1	1	.....	.....	3

MORBIDITY TABLE 7.

Typhoid Fever by Sex and Color.

	Total.	White.	Black.	Unstated.
Total,	7,653	7,539	108	6
Male,	4,458	4,389	63	6
Female,	3,195	3,140	45	

MORBIDITY TABLE 8.

Typhoid Fever by Nativity and Sex.

	Total.	Native.	Foreign.	Unstated.
Total,	7,653	6,501	840	312
Male,	4,458	3,716	562	180
Female,	3,195	2,785	278	122

MORBIDITY TABLE 9.

DIPHTHERIA.

Comparison of Cases Reported by Months for the Years 1906-1914, Inclusive.

	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	Total. 1914.	Urban. 1914.	Rural. 1914.
Total,	10,370	10,510	12,509	13,133	14,061	16,096	16,617	16,864	16,070	11,597	4,473
January,	1,042	1,095	1,098	1,251	1,187	1,423	2,974	1,913	1,546	1,070	476
February,	885	828	952	1,167	994	1,191	1,133	1,421	1,192	941	251
March,	852	769	1,008	1,233	948	1,190	994	1,210	1,104	827	277
April,	703	737	670	847	1,041	963	923	1,175	1,035	809	226
May,	688	575	672	919	1,044	863	884	1,125	776	613	163
June,	546	553	597	849	868	897	745	968	872	644	228
July,	437	473	621	725	750	746	671	782	830	566	264
August,	461	597	589	739	857	924	968	857	812	531	281
September,	994	796	1,122	981	1,153	1,358	1,508	1,493	1,504	1,005	499
October,	1,589	1,283	1,857	1,380	1,681	2,290	1,165	1,932	2,111	1,437	624
November,	1,458	1,501	1,742	1,434	2,010	2,233	2,460	2,021	2,294	1,648	646
December,	1,215	1,303	1,531	1,553	1,528	2,018	2,192	1,967	1,994	1,456	538

MORBIDITY TABLE 10.

Distribution of Diphtheria Reported in 1914, by Age Periods, State, Urban and Rural, and Percentage at Each Age of the Cases in Each Locality.

	Total State.		Urban.		Rural.	
	Cases.	Per cent.	Cases.	Per cent.	Cases.	Per cent.
All ages,	16,070	.....	11,597	.....	4,473	.....
Under 5 years,	5,125	31.9	3,898	33.6	1,227	27.4
5-9 years,	5,851	36.4	4,310	37.2	1,541	34.4
10-14 years,	2,196	13.7	1,430	12.3	766	17.1
15-19 years,	857	5.3	527	4.5	330	7.4
20-24 years,	634	3.9	453	3.9	181	4.0
25-29 years,	426	2.6	312	2.7	114	2.5
30-34 years,	302	1.9	199	1.7	103	2.3
35-39 years,	188	1.2	131	1.1	57	1.3
40 years and over,	312	1.9	185	1.7	123	2.7
Unstated,	179	1.1	148	1.3	31	0.7

MORBIDITY TABLE 13.
Diphtheria by Sex and Color

	Total.	White.	Black.	Unstated.
Total,	16,070	15,956	106	8
Male,	7,577	7,531	42	4
Female,	8,493	8,425	64	4

MORBIDITY TABLE 14.
Diphtheria by Nativity and Sex.

	Total.	Native.	Foreign.	Unstated.
Total,	16,070	14,779	839	452
Male,	7,577	6,839	401	237
Female,	8,493	7,840	438	215

MORTALITY TABLE 15.

SCARLET FEVER.

Comparison of Cases Reported by Months for the Years 1906-1914, Inclusive.

	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	Total. 1914.	Urban. 1914.	Rural. 1914.
Total,	7,670	7,699	14,413	15,536	12,951	10,382	10,963	15,434	17,190	13,042	4,148
January,	879	713	1,413	1,782	1,671	1,195	967	1,723	1,946	1,253	593
February,	875	572	1,431	1,608	1,415	1,051	945	1,485	1,955	1,599	465
March,	758	678	1,590	1,873	1,521	1,180	1,052	1,710	2,540	1,914	596
April,	687	577	1,282	1,500	1,208	1,186	1,181	1,395	1,978	1,488	460
May,	701	479	1,105	1,189	1,455	1,091	1,058	1,541	1,511	1,218	293
June,	517	495	865	1,042	1,066	733	768	1,197	1,113	884	29
July,	378	373	617	776	617	407	458	624	665	502	163
August,	350	414	482	623	515	464	416	459	588	394	194
September,	425	528	967	786	613	489	547	700	797	640	157
October,	679	715	1,415	1,139	799	741	912	1,283	1,246	952	294
November,	687	1,085	1,687	1,640	1,066	878	1,233	1,493	1,442	1,199	242
December,	734	1,066	1,559	1,598	1,095	977	1,396	1,810	1,399	1,067	332

MORBIDITY TABLE 16.

Distribution of Scarlet Fever Reported in 1914, by Age Periods, State, Urban and Rural, with the Percentage in Each Age Period to Total Cases in Each Locality.

	Total State.		Urban.		Rural.	
	Cases.	Per cent.	Cases.	Per cent.	Cases.	Per cent.
All ages,	17,190	.....	13,042	.....	4,148	.....
Under 5 years,	4,074	23.7	3,080	23.6	994	24.0
5-9 years,	7,176	41.7	5,573	42.7	1,603	38.7
10-14 years,	3,313	19.2	2,428	18.6	885	21.3
15-19 years,	1,078	6.3	740	5.7	338	8.1
20-24 years,	610	3.5	456	3.5	154	3.7
25-29 years,	310	1.8	252	1.9	58	1.4
30-34 years,	183	1.1	138	1.1	45	1.1
35-39 years,	95	0.6	70	0.5	25	0.6
40 years and over,	95	0.6	73	0.6	22	0.5
Age unstated,	256	1.5	222	1.8	24	0.6

MORBIDITY TABLE 17.

Scarlet Fever by Nativity and Age Periods.

	All ages.	Under 5.	5-9.	10-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70 and over.	Un-stated.
Total	17,190	4,074	7,176	4,331	920	278	75	12	8		256
Native	15,918	3,721	6,700	4,069	838	243	60	11	7		279
Foreign	800	247	161	161	50	27	15		1		6
Unstated	472	106	183	131	32	8		1			11

MORBIDITY TABLE 18.

Scarlet Fever by Color and Age Periods.

	All ages.	Under 5.	5-9.	10-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70 and over.	Un-stated.
Total	17,190	4,074	7,176	4,331	920	278	75	12	8		256
White	17,032	4,034	7,104	4,350	914	272	75	11	8		245
Black	161	38	71	35	5	6					5
Unstated	13	2	1	2	1			1			6

MORBIDITY TABLE 19.
Scarlet Fever by Sex and Color.

	Total.	White.	Black.	Unstated.
Total,	17,190	17,013	164	13
Males,	8,041	7,958	80	3
Females,	9,149	9,055	84	10

MORBIDITY TABLE 20.
Scarlet Fever by Nativity and Sex.

	Total.	Native.	Foreign.	Unstated.
Total,	17,190	15,918	800	472
Male,	8,041	7,441	377	223
Female,	9,149	8,477	423	249

MORBIDITY TABLE 21.
TUBERCULOSIS.

Comparison of Cases Reported by Months for the Years 1906-1914, Inclusive.

	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	Total. 1914.	Urban. 1914.	Rural. 1914.
Total,	5,234	6,109	10,418	14,646	14,572	14,535	13,084	12,830	13,432	11,993	1,439
January,	483	546	802	1,114	1,054	1,321	1,145	1,139	1,182	1,030	152
February,	367	530	696	1,011	1,072	1,268	1,135	915	917	839	78
March,	374	477	759	1,347	1,455	1,415	1,160	1,136	1,306	1,181	125
April,	370	450	756	1,299	1,512	1,212	1,253	1,220	1,316	1,189	127
May,	402	587	744	1,388	1,411	1,295	1,319	1,203	1,267	1,153	114
June,	474	477	826	1,479	1,118	1,248	1,208	1,170	1,285	1,137	148
July,	563	475	985	1,622	1,102	1,350	1,188	1,042	1,214	1,078	136
August,	486	512	952	1,375	1,282	1,081	1,092	1,009	1,030	890	140
September,	401	482	813	1,146	1,137	1,159	940	1,027	929	819	110
October,	499	478	991	993	1,263	1,072	888	1,057	1,106	986	120
November,	330	476	1,052	965	1,086	1,028	776	960	907	816	91
December,	435	619	1,042	907	1,030	1,076	980	952	973	875	98

MORBIDITY TABLE 22.

Distribution of Tuberculosis Reported in 1914, by Age Periods, State, Urban and Rural, with the Percentage in Each Age Period to Total Cases in Each Locality.

	Total State.		Urban.		Rural.	
	Cases.	Per cent.	Cases.	Per cent.	Cases.	Per cent.
Total all ages,	13,432	.....	11,993	.....	1,439	.....
Under 5 years,	322	2.4	279	2.3	43	3.0
5-9 years,	657	4.9	565	4.7	92	6.4
10-14 years,	661	4.9	562	4.7	99	6.9
15-19 years,	1,053	7.8	923	7.7	130	9.0
20-24 years,	1,779	13.2	1,581	13.2	198	13.7
25-29 years,	1,815	13.5	1,623	13.5	192	13.3
30-34 years,	1,634	12.2	1,464	12.2	170	11.8
35-39 years,	1,459	10.9	1,321	11.0	138	9.6
40-44 years,	1,098	8.2	996	8.3	102	7.1
45-49 years,	817	6.1	761	6.4	56	3.9
50-54 years,	590	4.4	521	4.3	69	4.8
55-59 years,	433	3.2	400	3.4	33	2.3
60-64 years,	274	2.0	241	2.0	33	2.3
65-69 years,	163	1.2	133	1.1	30	2.1
70-74 years,	81	0.6	71	0.6	10	0.7
75 years and over,	47	0.4	36	0.3	11	0.8
Age unstated,	549	4.1	516	4.3	33	2.3

MORBIDITY TABLE 23.
Tuberculosis by Nativity and Age Periods.

	All ages.	Under 5.	5-9.	10-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70 and over.	Un-stated.
Total	13,482	322	657	1,714	3,594	3,093	1,915	1,023	437	128	549
Native	8,899	225	573	1,403	2,426	2,000	1,143	623	262	81	163
Foreign	2,724	32	56	31	50	55	513	269	110	30	44
Unstated	1,899	65	28	220	338	338	256	140	65	17	342

MORBIDITY TABLE 24.
Tuberculosis by Age and Color.

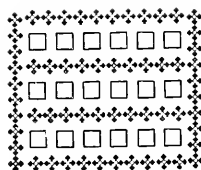
	All ages.	Under 5.	5-9.	10-19.	20-29.	30-39.	40-49.	50-59.	60-69.	70 and over.	Un-stated.
Total	13,432	322	657	1,714	3,594	3,093	1,915	1,023	437	128	549
White	11,816	315	625	1,586	3,247	2,754	1,659	839	333	114	234
Black	479	7	21	75	135	113	75	35	6	4	9
Unstated	1,137	.....	11	53	212	227	131	99	38	10	306

MORBIDITY TABLE 25.
Tuberculosis by Sex and Color.

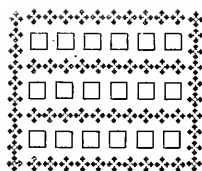
	Total.	White.	Black.	Unstated.
Total,	13,432	11,816	479	1,137
Male,	7,466	6,462	271	733
Female,	5,966	5,354	208	404

MORBIDITY TABLE 26.
Tuberculosis by Nativity and Sex.

	Total.	Native.	Foreign.	Unstated.
Total,	13,432	8,899	2,724	1,809
Male,	7,466	4,552	1,811	1,103
Female,	5,966	4,347	913	706



MARRIAGE STATISTICS.



MARRIAGES.

A total of 67,567 marriages were recorded during the year. The number of persons married per 1,000 of population was 16.4. The average age of brides at first marriage was 22.6 years and grooms 25.6 years.

The following general marriage tables for the year are presented:

Table 1. Marriages for the entire State and for each county, by months, for the year 1914.

Table 2. The number of persons married per 1,000 of population, by counties for each year of the nine-year period, 1906-1914, inclusive.

Table 3. Marriages by ages and nativity of brides and grooms, for the year 1914.

Table 4. Percentage of brides and grooms of first marriages in each age period based on the total for the year at all ages.

Table 5. Percentage of marriages in each month of the year based on the total yearly marriages, for the years 1906-1914, inclusive.

Table 6. Marriages and re-marriages by ages and nativity of brides and grooms.

Table 7. Dissolution of prior marriages by ages and nativity of brides and grooms.

MARRIAGE TABLE 1.
Marriages for the Entire State and for Each County, by Months, for the Year 1914.

AREA.	Aggre- gate.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Total,	67,567	5,283	5,425	3,315	5,627	5,163	8,537	4,660	5,283	6,448	6,658	6,400	4,548
Adams county,	188	18	19	14	20	9	14	10	9	14	18	21	22
Allegheny county,	10,645	865	887	428	779	892	1,510	796	888	1,095	975	963	567
Armstrong county,	52	35	36	32	52	49	77	28	31	56	46	59	51
Beaver county,	731	44	64	41	64	45	76	67	72	86	59	56	57
Bedford county,	193	13	13	14	18	13	23	12	11	14	15	23	22
Berks county,	1,384	142	113	95	155	144	171	84	169	142	158	183	128
Blair county,	331	63	60	57	53	56	120	61	61	85	77	73	69
Bradford county,	468	48	36	33	39	36	60	30	33	32	43	39	43
Bucks county,	214	49	31	40	45	32	63	33	35	44	62	46	41
Butler county,	578	41	44	37	45	51	33	38	39	51	63	48	38
Cambria county,	1,244	114	132	52	105	135	158	112	102	104	122	125	72
Cameron county,	62	7	7	2	10	3	10	5	4	4	4	5	6
Carlisle county,	542	25	60	18	32	26	57	48	47	54	73	46	37
Center county,	267	14	15	16	22	19	35	13	28	26	20	23	36
Chester county,	675	63	51	42	53	47	85	43	52	64	61	73	44
Clarion county,	298	10	10	6	13	12	32	24	18	24	20	21	17
Clearfield county,	688	50	57	61	54	50	80	52	62	68	68	59	62
Clinton county,	246	17	18	15	18	12	38	15	18	31	30	28	21
Columbia county,	366	30	35	26	31	21	53	17	23	25	41	32	32
Crawford county,	542	31	32	26	54	37	78	70	42	61	61	47	43
Cumberland county,	302	28	26	21	24	21	30	16	10	27	28	28	45
Dauphin county,	1,228	104	93	58	114	77	143	77	90	109	119	128	122
Delaware county,	972	65	70	45	86	77	130	72	68	105	116	81	57
Elk county,	241	16	24	8	18	21	35	14	22	24	25	19	15
Erle county,	1,168	110	90	57	98	89	164	93	136	101	95	103	82
Fayette county,	1,220	120	102	67	86	108	146	83	67	81	130	108	104
Forest county,	45	4	4	4	4	6	4	6	5	6	6	5	6
Franklin county,	312	28	20	23	29	18	30	14	25	23	17	40	45
Fulton county,	159	7	3	3	10	6	5	4	3	3	4	4	4
Greene county,	158	9	7	6	8	13	17	9	14	17	15	17	27

Huntington county,	258	72	21	16	19	19	32	23	9	75	26	18	24
Indiana county,	567	42	55	21	50	53	58	33	47	58	33	45	46
Jefferson county,	485	40	39	23	47	47	50	52	32	52	48	40	46
Juniata county,	103	9	16	16	9	7	7	5	7	13	5	5	12
Lackawanna county,	2,719	92	241	156	267	213	345	112	236	277	346	247	147
Lancaster county,	1,358	118	30	100	128	80	151	72	103	111	111	157	111
Lawrence county,	769	48	43	48	49	46	46	47	37	45	42	52	52
Lebanon county,	193	33	33	32	33	35	35	37	37	32	38	43	37
Lehigh county,	1,352	112	101	91	133	125	137	141	151	124	141	142	150
Luzerne county,	3,241	258	321	36	264	258	417	277	279	356	351	337	147
Lycoming county,	685	42	42	44	68	40	95	95	74	74	61	61	69
McKean county,	892	38	38	22	24	23	23	23	31	33	30	25	20
Mercer county,	617	50	32	24	24	51	40	43	56	55	54	50	41
Millheim county,	197	27	16	18	17	9	19	10	14	5	24	11	25
Monroe county,	190	14	11	10	15	9	16	12	21	26	23	19	14
Montgomery county,	1,270	97	87	64	119	69	178	82	100	122	146	132	74
Monticello county,	118	6	6	10	8	10	15	11	9	14	13	6	10
Northampton county,	1,218	130	98	52	119	119	167	62	101	132	144	165	89
Northumberland county,	974	67	101	24	72	76	118	80	94	88	21	50	93
Perry county,	133	12	6	12	8	9	21	9	4	7	9	11	12
Philadelphia county,	14,658	1,176	1,171	710	1,311	1,025	2,179	918	1,101	1,473	1,461	1,504	319
Pike county,	29	3	1	2	5	2	6	.....	1	4	1	3	1
Pottor county,	164	6	20	12	13	14	27	18	11	16	10	10	14
Schuylkill county,	1,825	167	178	93	123	152	265	137	152	153	157	175	107
Snyder county,	128	9	13	14	14	6	11	10	6	17	13	4	11
Somerset county,	569	25	29	27	41	46	58	36	45	53	41	50	45
Sullivan county,	66	6	4	3	3	3	16	3	3	6	11	9	4
Susquehanna county,	272	20	23	11	15	20	37	19	21	33	28	32	18
Tioga county,	270	20	17	15	21	16	31	26	21	21	24	31	16
Union county,	143	16	13	9	14	11	13	9	12	8	11	11	16
Venango county,	413	35	27	23	46	36	56	31	42	37	51	46	55
Warren county,	286	16	17	13	22	25	33	23	23	23	27	20	14
Washington county,	1,039	94	97	52	68	87	150	96	104	83	86	100	74
Wayne county,	433	13	7	14	17	30	26	20	11	21	21	21	14
Westmoreland county,	1,341	117	175	73	124	107	218	176	174	196	152	201	117
Wyoming county,	142	5	14	6	6	10	10	10	8	23	13	16	17
York county,	1,073	86	73	81	127	66	103	54	67	79	96	111	127

MARRIAGE TABLE 2.

Number of Persons Married per 1,000 of Population, by Counties, for each Year of the Nine Year Period 1906-1914, Inclusive.

	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.
Entire State, ..	17.1	17.0	15.3	15.9	16.2	15.9	16.3	17.1	16.4
Counties.									
Adams,	12.3	12.2	12.8	12.0	13.4	12.1	13.4	12.4	10.9
Allegheny,	20.1	22.1	17.0	19.0	20.4	19.2	19.5	21.6	19.8
Armstrong,	19.2	16.9	16.4	17.7	17.1	14.0	15.9	16.8	14.8
Beaver,	18.2	20.1	16.2	18.3	16.2	15.5	16.7	17.9	16.7
Bedford,	12.1	13.5	11.8	10.1	11.4	11.8	11.7	9.3	9.9
Berks,	19.5	18.7	15.9	16.5	15.8	15.2	15.3	16.6	16.4
Blair,	20.8	21.1	15.0	16.5	15.0	15.5	15.8	15.3	14.2
Bradford,	9.0	10.6	14.6	13.4	14.0	15.4	15.8	15.0	17.5
Bucks,	11.5	11.8	11.4	12.1	15.1	12.6	11.3	12.5	13.6
Butler,	17.5	21.2	18.5	17.3	11.2	14.3	13.6	15.3	14.6
Cambria,	22.0	22.5	16.4	16.9	17.6	13.8	14.6	16.4	14.0
Cameron,	17.3	15.6	16.4	13.0	13.0	15.3	15.6	19.6	15.3
Carbon,	16.2	15.2	18.2	18.2	18.3	18.6	17.9	19.8	19.3
Centre,	16.7	15.2	13.2	14.2	15.2	13.1	12.9	13.6	12.2
Chester,	15.1	13.8	11.8	11.4	11.0	11.4	10.6	12.2	11.8
Clarion,	13.4	12.7	14.5	13.5	12.8	12.5	14.0	13.8	11.1
Clearfield,	14.9	15.8	15.4	15.0	14.7	14.8	15.4	14.9	14.0
Clinton,	16.1	15.9	15.3	14.1	15.5	15.4	16.3	17.3	15.1
Columbia,	16.1	16.7	16.2	15.5	16.1	13.4	16.3	15.3	14.1
Crawford,	13.1	13.5	15.3	16.0	18.3	17.3	18.5	16.5	17.9
Cumberland,	14.7	15.3	14.1	11.8	12.7	10.4	11.1	11.6	10.7
Dauphin,	23.2	22.7	18.7	19.4	19.8	17.5	18.6	18.7	16.9
Delaware,	16.1	15.2	12.0	13.2	15.1	14.7	13.6	16.1	15.2
Elk,	11.4	11.1	11.4	9.9	14.3	13.8	14.2	11.6	13.0
Erie,	13.1	14.3	13.4	15.9	17.3	16.4	17.1	19.6	19.0
Fayette,	19.0	18.7	13.1	15.9	14.9	13.5	13.6	16.3	12.8
Forest,	8.0	8.7	9.9	5.7	9.7	10.0	12.9	9.6	11.0
Franklin,	13.5	13.3	12.4	11.8	12.3	12.5	11.4	10.9	10.1
Fulton,	11.2	10.5	10.0	10.8	13.2	11.4	11.7	11.7	12.3
Greene,	12.3	14.1	14.0	14.8	11.6	12.1	13.7	9.6	10.9
Huntingdon,	17.8	17.8	15.0	12.8	13.4	13.1	14.0	15.2	12.9
Indiana,	23.0	22.2	23.4	21.9	15.6	15.2	16.1	15.0	14.9
Jefferson,	14.1	13.9	13.8	12.3	15.7	15.2	15.1	14.8	14.9
Juniata,	17.9	17.7	15.0	15.0	16.7	17.0	15.0	14.7	14.1
Lackawanna,	19.2	17.3	18.4	18.4	13.2	13.3	13.3	13.7	19.0
Lancaster,	15.7	15.9	15.6	14.7	15.2	15.3	15.3	15.5	15.7
Lawrence,	16.8	16.9	15.3	17.0	20.6	19.0	20.6	22.3	20.1
Lebanon,	19.0	17.3	17.8	17.4	18.3	18.0	15.9	16.7	15.9
Lehigh,	24.4	27.2	22.1	22.6	21.7	23.0	21.5	20.9	20.9
Luzerne,	15.1	14.5	15.8	15.5	16.1	16.0	15.9	17.5	17.1
Lycoming,	14.3	13.8	14.0	16.6	15.3	16.0	16.2	15.7	16.5
McKean,	6.6	7.8	9.7	10.9	11.7	13.1	11.5	17.7	14.3
Mercer,	18.1	19.6	13.6	16.0	15.6	11.3	14.5	15.0	14.2
Mifflin,	21.3	20.9	15.9	15.3	15.1	11.6	13.7	14.3	20.0
Monroe,	16.7	14.4	9.3	15.6	14.7	16.0	17.2	15.1	16.0
Montgomery,	15.1	14.3	12.3	12.6	12.7	11.6	11.6	13.0	13.9
Montour,	12.7	14.0	17.6	16.7	15.4	18.0	17.0	16.0	16.2
Northampton,	18.3	19.9	17.4	17.7	16.0	17.4	17.8	18.7	18.9
Northumberland,	16.2	16.9	17.3	15.5	15.2	16.4	15.9	16.2	16.2
Perry,	11.7	15.5	12.1	11.2	11.2	12.0	12.0	10.0	10.6
Philadelphia,	17.7	17.5	14.4	15.2	16.4	17.5	17.6	18.2	18.1
Pike,	5.6	6.8	9.6	7.0	9.9	7.5	9.9	10.2	7.5
Potter,	7.4	6.0	10.2	9.8	11.1	12.1	10.8	11.9	11.2
Schuylkill,	17.0	17.9	17.4	17.1	15.3	15.7	15.2	15.0	16.4
Snyder,	18.9	17.6	16.7	13.1	14.5	14.2	13.6	16.2	15.4
Somerset,	17.8	17.8	14.8	15.6	14.2	13.8	12.8	14.3	13.5
Sullivan,	10.6	9.1	10.2	12.0	11.8	12.0	10.3	11.6	12.2
Susquehanna,	11.4	13.0	14.8	13.4	12.9	13.5	14.3	16.1	14.3
Tioga,	8.3	7.8	12.3	12.6	18.0	12.4	12.6	12.0	13.6
Union,	15.1	15.7	14.0	14.0	15.8	13.9	15.0	16.6	18.4
Venango,	16.8	16.6	15.5	16.1	14.8	15.6	16.3	18.2	15.0
Warren,	9.2	10.0	14.0	13.5	14.4	14.3	16.3	14.4	14.2
Washington,	19.6	18.0	15.5	16.4	13.6	13.1	13.2	13.3	12.6
Wayne,	10.1	9.0	11.4	12.1	13.4	12.4	12.9	14.5	13.4
Westmoreland,	17.1	16.6	14.1	15.7	14.0	13.8	15.0	16.1	14.9
Wyoming,	12.5	10.6	11.0	12.7	15.0	14.5	13.1	12.9	19.2
York,	17.8	16.0	15.1	16.1	15.6	15.2	15.5	14.8	14.8

MARRIAGE TABLE 3.

Marriages by Ages and Nativity of Brides and Grooms for the Year 1914.

Ages.	Brides.				Grooms.			
	Total.	Native.	Foreign.	Unstated.	Total.	Native.	Foreign.	Unstated.
Total,	67,567	47,731	17,245	2,591	67,567	45,059	19,962	2,545
Under 15 years,	92	60	24	8	.....	.....	.....	.....
15 to 19 years,	13,845	10,662	2,466	717	2,432	2,168	167	157
20 to 24 years,	33,410	21,806	10,485	1,119	29,406	19,949	8,296	1,161
25 to 29 years,	10,822	8,220	2,238	364	19,683	11,740	7,294	649
30 to 34 years,	4,144	3,103	871	170	7,128	4,782	2,126	229
35 to 39 years,	2,268	1,669	523	76	3,685	2,594	665	126
40 to 44 years,	1,245	930	262	53	2,008	1,457	470	81
45 to 49 years,	777	547	196	34	1,204	875	282	47
50 to 54 years,	421	321	79	21	803	559	202	42
55 to 59 years,	247	192	45	10	514	395	98	21
60 to 64 years,	112	84	23	5	397	221	66	20
65 to 69 years,	48	38	4	6	181	145	29	10
70 years and over,	17	9	5	3	151	123	20	8
Age unstated,	119	90	24	5	62	51	8	3

MARRIAGE TABLE 4.

Percentage of Brides and Grooms of First Marriages in Each Age Period Based on the Total for the Year at all Ages.

Ages.	Brides.	Grooms.
Total,	100.0	100.0
Under 15 years,	0.1	0.0
15 to 19 years,	22.4	4.0
20 to 24 years,	53.2	48.0
25 to 29 years,	15.6	31.0
30 to 34 years,	4.9	10.0
35 to 39 years,	2.0	4.1
40 to 44 years,	0.8	1.7
45 to 49 years,	0.4	0.8
50 years and over,	0.3	0.4
Unstated,	0.2	0.1

MARRIAGE TABLE 5.

Percentage of Marriages in Each Month of the Year Based on the Total Yearly Marriages, for the Nine Year Period 1906-1914, Inclusive.

	1906	1907	1908	1909	1910	1911	1912	1913	1914
January,	7.4	7.1	7.8	7.6	8.0	7.5	7.4	7.9	7.8
February,	8.1	6.8	8.7	7.8	6.5	8.6	7.5	6.0	8.1
March,	5.0	5.3	5.9	5.3	5.7	5.1	4.9	6.1	4.9
April,	8.3	8.9	7.5	7.8	8.5	7.6	8.2	8.5	8.2
May,	6.8	7.2	6.9	7.3	7.2	7.3	6.8	7.6	7.7
June,	12.8	13.4	12.6	13.7	13.5	13.2	12.2	13.2	13.1
July,	6.8	7.1	6.8	6.9	7.2	7.0	6.8	7.6	6.9
August,	7.4	7.5	7.6	7.5	7.6	7.6	7.8	7.6	7.8
September,	10.0	9.6	9.3	9.7	9.2	9.2	9.6	9.6	9.5
October,	10.2	10.1	9.4	9.7	9.7	9.5	10.2	9.6	9.8
November,	9.8	9.6	9.4	9.9	9.6	9.9	10.4	9.8	9.5
December,	7.4	7.4	8.1	7.8	7.1	7.5	8.2	6.6	6.7

MARRIAGE TABLE 6.

Marriages and Re-marriages by Ages of Brides and Grooms.

Ages.	Brides.					Grooms.				
	Total.	First.	Second.	Third.	Fourth.	Total.	First.	Second.	Third.	Fourth.
Total,	67,567	61,570	5,894	103	.....	67,567	60,897	6,499	169	2
Under 15 years,	92	92	.....	.....	.....	.....	.....	.....	.....	.....
15 to 19 years,	13,845	13,823	22	.....	.....	2,432	2,429	3	.....	.....
20 to 24 years,	33,410	32,756	653	1	.....	29,406	29,209	197	.....	.....
25 to 29 years,	10,822	9,619	1,197	6	.....	19,683	18,586	797	.....	.....
30 to 34 years,	4,144	3,000	1,135	9	.....	7,128	6,065	1,057	6	.....
35 to 39 years,	2,268	1,230	1,020	18	.....	3,685	2,507	1,160	18	.....
40 to 44 years,	1,245	505	723	17	.....	2,008	1,016	713	19	.....
45 to 49 years,	777	242	517	18	.....	1,204	465	713	25	1
50 to 54 years,	421	125	282	14	.....	803	163	620	20	.....
55 to 59 years,	247	50	185	12	.....	514	74	414	26	.....
60 to 64 years,	112	12	93	7	.....	307	19	264	24	.....
65 to 69 years,	48	6	41	1	.....	184	7	161	16	.....
70 years and over,	17	1	16	.....	.....	151	13	122	15	1
Unstated age,	119	109	10	.....	.....	62	44	18	.....	.....

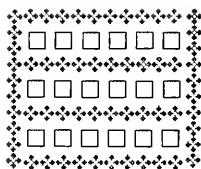
MARRIAGE TABLE 7.

Dissolution of Last Prior Marriages by Ages of Brides and Grooms.

Ages.	Brides.			Grooms.		
	Total.	Death.	Divorce.	Total.	Death.	Divorce.
Total,	5,997	4,230	1,767	6,670	5,166	1,504
Under 20 years,	22	15	7	3	2	1
20 to 24 years,	654	341	313	197	124	73
25 to 29 years,	1,203	703	500	797	517	280
30 to 34 years,	1,144	762	382	1,063	727	336
35 to 39 years,	1,038	755	283	1,178	792	317
40 to 44 years,	740	587	153	992	861	200
45 to 49 years,	535	460	75	739	616	123
50 to 54 years,	296	262	34	640	557	83
55 to 59 years,	197	183	14	440	382	58
60 to 64 years,	100	96	4	288	272	16
65 to 69 years,	42	40	2	177	163	9
70 years and over,	16	16	.....	138	133	5
Unstated age,	10	10	.....	18	15	3

DIVISION OF LABORATORIES.

J. B. RUCKER, JR., M. D., *Director.*



REPORT OF THE LABORATORIES.

The results of the work of the Laboratories for the year 1914 show a much greater number of specimens examined than in any previous year. During the last seven months of the year a new department of work was introduced—that of making Wassermann tests in the cases of patients attendant upon the Tuberculosis Dispensaries of the Pennsylvania Department of Health, in which the diagnosis of luetic disease might be either confirmed or eliminated. The introduction of this new work by the Commissioner applied only to the State Tuberculosis Dispensaries and was not made available to physicians in general.

A tabulation of the number of specimens of each kind examined is here given showing the number of each for each month of the year with a grand total of seventeen thousand two hundred and six (17,206) examinations. As will be shown later, the preliminary inspection of these specimens demonstrated a very small number to be in such a condition as to preclude any thorough examination.

SPECIMENS EXAMINED IN THE LABORATORIES DURING THE YEAR 1914.

	A	B	C	D	E	F	G	H	J	K	S	Total
January,	4	59	588	26	15	37	1	570	5	18	.....	1,323
February,	2	72	497	16	13	23	3	585	19	31	.....	1,261
March,	2	122	663	30	13	43	3	447	16	20	.....	1,359
April,	6	56	714	28	24	38	.....	509	7	23	.....	1,405
May,	7	76	750	29	20	37	.....	696	19	15	.....	1,649
June,	4	65	735	41	13	35	.....	441	7	14	7	1,362
July,	5	80	647	40	22	36	7	549	17	17	23	1,443
August,	8	110	678	47	13	28	2	581	7	10	9	1,523
September, ...	2	196	650	60	17	24	3	748	31	31	10	1,772
October,	6	148	606	31	18	30	3	715	27	56	14	1,654
November, ...	3	51	552	34	10	19	7	426	5	57	11	1,215
December, ...	3	66	532	46	18	31	.....	424	8	93	19	1,210
	52	1,171	7,612	428	196	381	29	6,691	168	385	93	17,206

A Malaria.
 B Typhoid.
 C Sputum.
 D Urine.
 E Pathological fluids.
 F Pathological growths.

G Milk.
 H Water.
 J Fees.
 K Miscellaneous.
 S Wassermann.

Further details concerning these specimens seem necessary:

A—Malaria:—Fifty-two specimens of blood were examined for the presence of the plasmodium. Only two of these showed its presence and rather strange to say, these two positive findings were made in blood smears from women. The negatives were divided among male and female patients in the ratio of twenty-eight to twenty-two.

It was surprising to note that there were received no specimens unfit for examination.

B—Widal Reaction:—For this inspection 1,171 specimens were received. Fifty-five of them were unfit for examination, leaving the total number examined as 1,116. The positive numbered 410, of which 216 were from males and 194 from females. For 706 the result was negative to *B. typhosus*, 394 of these being from males and 312 from females.

Of the specimens which showed a positive reaction with *B. typhosus* where agglutination tests were made with eight different microorganisms of the typhoid-colon-dysentery group, viz: *B. typhosus*, *B. paratyphosus A*, *B. paratyphosus B*, *B. paracoli*, *B. enteritidis* (Gaertner), *B. dysenteriae* (Shiga), *B. suisepiticus*, and *B. Coli*, of which there were in all forty-nine, there were:—

- 33 positive to *B. typhosus* alone
- 2 positive to *B. typhosus* and *B. paratyphosus A*.
- 3 positive to *B. typhosus* and *B. paratyphosus B*.
- 3 positive to *B. typhosus* and *B. paracoli*.
- 3 positive to *B. typhosus* and *B. enteritidis*.
- 2 positive to *B. typhosus* and *B. coli*.
- 2 positive to *B. typhosus* and *B. paratyphosus A*, and *B. paracoli*.
- 1 positive to *B. typhosus* and *B. paracoli*, and *B. enteritidis*.

Included in the specimens giving a negative reaction with *B. typhosus*, there were sixty-one for which agglutination tests were made with the eight microorganisms enumerated above, giving the results:

- 51 negative to all
- 1 negative to seven, but positive to *B. paratyphosus A*.
- 1 negative to seven, but positive to *B. paratyphosus B*.
- 4 negative to seven, but positive to *B. paracoli*.
- 1 negative to seven, but positive to *B. enteritidis*.
- 11 negative to seven, but positive to *B. coli*.
- 1 negative to six, but positive to *B. enteritidis*, and *B. paracoli*.

C—Sputum for Tubercle Bacilli:—A total of 7,612 specimens of sputum were received at the Laboratory for examination. Of these, 1,952 showed the presence of the tubercle bacillus, while in 5,656 this

microorganism was not found. Four specimens were unfit for examination. Of the 1,952 positive specimens, 1,166 or 59.7 per cent. were from males and 786 or 40.3 per cent. from females.

Among the negatives were 2,845 from males and 2,811 from females.

The percentage of the positive findings of the total number of specimens examined was 25.6.

D—Urine:—A total of 428 specimens were received during the year, twelve of which were unfit for examination, leaving a balance of 416 specimens actually examined.

In 159 of these specimens, tubercle bacilli were sought for and found in eighty-nine, while in seventy these microorganisms were not found. A general bacteriological examination was made of nine specimens.

By special permission of the commissioner, 237 specimens were given a routine chemical examination. These were all sent in by the three Philadelphia Dispensaries for Tuberculosis maintained by the Pennsylvania Department of Health.

The diazo-reaction was made with eleven specimens of urine, one of which gave a positive result while ten were reported as negative.

E—Pathological Fluids:—Of such, 196 specimens were received. Seven of these were unfit for examination.

Among the 189 specimens actually examined, tubercle bacilli were sought for in 102. They were present in sixty-nine and were not found in thirty-three. In the group examined for tubercle bacilli, there were ten specimens which were also examined for the presence of other bacteria, viz: staphylococcus, streptococcus, pneumococcus, gonococcus, meningococcus, and *B. coli*.

Among these ten, tubercle bacilli were found in four, but we failed to note the presence of pneumococci, gonococci, staphylococci, staphylococci, or streptococci, in the respective preparations.

The six specimens which were negative as to tubercle bacilli were also examined for the presence of other microorganisms. In two, pneumococci were sought and not found; in one specimen, meningococcus was sought and not found; in one, staphylococcus and streptococcus were sought and not found; in one, *B. coli* was sought and not found, but staphylococcus was present; and in the remaining specimen, staphylococcus, diphtheroid bacteria, pus cells, and yeast cells were present.

Sixty-six specimens were examined for the gonococcus. Eight of these showed its presence while fifty-eight were negatively reported.

One of these negative specimens showed numerous large diplococci, probably involution forms of the staphylococcus. Another showed large numbers of staphylococci, a few spore bearers, and diphtheroid bacteria.

Five requests for examination of stomach contents for the presence of the Oppler-Boas bacillus were made. This organism was not found in any of the specimens.

Sixteen miscellaneous specimens of pathological fluids were examined for staphylococci, streptococci, diphtheroid rods, pus cells, bacilli of anthrax, glanders, and leprosy, *B. coli* and *B. typhosus*, and *Treponema pallidum*. It is interesting to note that leprosy bacilli were found in smears from sores of the tongue, lip, nostril, and ear. They were differentiated by Baumgarten's method of staining. The *Treponema*, *B. mallei*, *Bact. anthracis*, or *B. typhosus* was not found.

F—Pathological Tissues:—Altogether 381 of these specimens were received and examined. A vast majority of them were sections of tumors supposed to be malignant. In reporting the examination, a description of the histological appearance of the tissue as well as the diagnosis was given.

G—Milk:—Twenty-nine samples of milk were examined. A report on the number of colonies of *B. coli* and the number of colonies of all kinds of bacteria in one cubic centimeter, and the presence or absence of streptococci is made in the case of each sample submitted for examination. Following is a tabulation of the number of samples enumerated as to counties and points of collection.

MILK LIST.

ARMSTRONG COUNTY		MONTGOMERY COUNTY	
Kittanning,	1	Skippack Township,	1
CAMBRIA COUNTY		MONTOUR COUNTY	
Loretto,	1	Danville,	6
Johnstown,	8	FAYETTE COUNTY	
DAUPHIN COUNTY		Connellsville,	1
Harrisburg,	1	NORTHUMBERLAND COUNTY	
Elizabethville,	4	Sunbury,	1
HUNTINGDON COUNTY		PERRY COUNTY	
Huntingdon,	2	Marysville,	2
Three Springs,	1		

H—Waters—In all, 6,691 samples were examined bacteriologically. In the examinations an estimation of the number of colonies of colon bacilli and of all kinds of bacteria in one cubic centimeter of the water in question was made as in former years.

The samples examined are here listed according to counties wherein samples were collected.

WATER LIST.

ADAMS COUNTY		BRADFORD COUNTY	
Biglerville,	11	Athens,	6
Cumberland Township,	1	Canton,	17
East Berlin,	18	Leona,	3
New Oxford,	16	Troy,	19
		Wyalusing,	1
ALLEGHENY COUNTY		BUCKS COUNTY	
Avalon,	1	Andalusia,	3
Bellevue,	2	Bristol,	87
Braddock,	5	Doylestown,	13
Castle Shannon,	4	George School,	5
Coraopolis,	11	Ivyland,	3
Duquesne,	11	Langhorne,	30
Harmarville,	2	Perkasie,	23
Homestead,	24	Pleasant Valley,	1
McKees Rocks,	1	Plumsteadville,	5
Millvale,	3	Quakertown,	13
Neville Island,	1	Warminster,	3
Oakmont,	3	Yardley,	2
Pittsburgh,	12		
Springdale,	6	BUTLER COUNTY	
Tarentum,	16	Adams Township,	3
Verners Island,	3	Center Township,	2
		Chicoora,	5
ARMSTRONG COUNTY		Cranberry Township,	2
Dayton,	4	Forestville,	2
Ford City,	39	Keisters,	3
Freeport,	2	Mars,	18
Kittanning,	61	Slippery Rock,	5
Rayburn Township,	4		
BEAVER COUNTY		CAMBRIA COUNTY	
Ambridge,	21	Barnesboro,	3
Beaver Falls,	4	Blandburg,	1
Economy,	6	Cambria City,	5
Hopewell Township,	3	Colver,	35
Midland,	12	Conemaugh,	2
New Brighton,	7	Coopersdale,	1
South Heights,	10	Cresson,	157
Woodlawn,	1	Ebensburg,	8
		Franklin,	1
BEDFORD COUNTY		Fallentimber,	3
Bedford,	5	Gallitzin,	6
Manns Choice,	2	Glasgow,	2
New Paris,	3	Hastings,	10
Woodbury,	12	Johnstown,	40
		Patton,	45
BERKS COUNTY		Sankertown,	6
Bally,	1	South Fork,	5
Bernville,	3		
Bethel,	3	CARBON COUNTY	
Colebrookdale Township,	2	Aquashicola,	3
Lower Heidelberg Township,	3	Beaver Meadow,	6
Fleetwood,	18	Bowmanstown,	1
Friedensburg,	3		
Hamburg,	54	CENTRE COUNTY	
Klinesville,	1	Julian,	4
Kutztown,	16	Rumville,	5
Monocacy,	1	State College,	13
Muhlenberg Township,	8		
Mverstown,	6	CHESTER COUNTY	
Oley,	3	Bradford Hills,	6
Reading,	130	Coatesville,	23
Sinking Springs,	5	East Goshen Township,	2
Shoemakersville,	3	Elverson,	14
Virginville,	1	Embreeville,	3
Wernersville,	305	Frezer,	4
Womelsdorf,	2	Oxford,	6
Wyomissing,	14	Kennett Township,	2
		Phoenixville,	2
BLAIR COUNTY		Pocopson Township,	1
Altoona,	32	Spring City,	202
Tyrone,	6	Valley Forge,	5
		Warwick,	9
		West Marlboro Township,	3
		West Brandywine Township,	2
		West Chester,	32

CLARION COUNTY		ERIE COUNTY	
Callensburg,	5	Edinboro,	5
Leeper,	5	Union Township,	6
Lucinda,	2	FAYETTE COUNTY	
New Bethlehem,	6	Bellevernon,	24
Rimersburg,	5	Brownsville,	17
Sarah Furnace,	2	Cheat Haven,	1
Sligo,	3	Connellsville,	2
CLEARFIELD COUNTY		German Township,	3
Tyler,	3	Guyaux,	1
CLINTON COUNTY		Indian Creek,	8
Avis,	5	Luzerne Township,	3
Renovo,	6	Markleysburg,	1
Woolrich,	1	Martin,	6
COLUMBIA COUNTY		Mill Run,	1
Berwick,	12	New Haven,	1
Bloom Township,	1	Ohiopyle,	4
Montour Township,	2	Republic,	6
CRAWFORD COUNTY		Smithfield,	2
Cussewago Township,	3	Uniontown,	16
Conneaut Township,	1	FOREST COUNTY	
Linesville,	3	East Hickory,	3
North Shenango Township,	1	Mayburg,	4
Richmond Township,	3	Tionesta,	4
CUMBERLAND COUNTY		FRANKLIN COUNTY	
Allen,	6	Antrim Township,	10
Boiling Springs,	11	Chambersburg,	9
Camp Hill,	1	Greene Township,	2
Carlisle,	6	Mercersburg,	1
Fort Washington,	1	Mont Alto,	212
Grantham,	6	Rouzerville,	6
Hampden Township,	1	Scotland,	6
Huntsdale,	5	State Line,	3
Lemoine,	2	Zullinger,	4
Lower Allen Township,	2	FULTON COUNTY	
Mechanicsburg,	6	Hustontown,	12
New Cumberland,	4	McConnellsburg,	9
Newville,	5	GREENE COUNTY	
Shippensburg,	4	Mt. Morris,	4
Washington Heights,	2	HUNTINGDON COUNTY	
DAUPHIN COUNTY		Aitch,	2
Cold Springs,	4	Alexandria,	5
Dauphin,	60	Brady Township,	3
Derry Church,	9	Broad Top City,	1
Harrisburg,	2	Carbon Township,	1
Hershey,	5	Dudley,	9
Highspire,	3	Grafton,	7
Hummelstown,	6	Huntingdon,	44
Lower Paxtang Township,	2	Juniata Township,	6
Lucknow,	2	Lincoln Township,	1
Middletown,	5	Mt. Union,	6
Penbrook,	4	Oneida Township,	1
Progress,	2	Robertsdale,	2
Steelton,	2	Shade Gap,	5
DELAWARE COUNTY		Shirleysburg,	1
Brandywine Summit,	4	Three Springs,	10
Chester,	2	Walker Township,	6
Cheyney,	4	Wood Township,	1
Drexel Hill,	20	INDIANA COUNTY	
Glen Riddle,	3	Clymer,	4
Lansdowne,	7	Heilwood,	6
Media,	42	Homer City,	12
Newtown Square,	7	Indiana,	7
Thornbury Township,	1	JEFFERSON COUNTY	
Wayne,	12	Brookville,	4
ELK COUNTY		Gaskill Township,	3
Ridgway,	2	Henderson Township,	1
Force,	4	Punxsutawney,	6
St. Marys,	6	Reynoldsville,	6
		Rose Township,	3
		Snyder Township,	3
		Winslow Township,	1

JUNIATA COUNTY		Montoursville,	5
Pleasant View,	2	Muney,	13
Thompsonstown,	6	Ralston,	5
LACKAWANNA COUNTY		McKEAN COUNTY	
Lausdown Park,	6	Custer City,	8
LANCASTER COUNTY		Eldrod,	6
Akron,	4	Mt. Jewett,	2
Bareville,	4	MERCER COUNTY	
Bartville,	3	Farrell,	4
Bird In Hand,	3	Greenville,	12
Cuernarvon Township,	5	Grove City,	270
Conestoga Creek,	2	Jamestown,	5
Christiana,	3	Mercer,	29
Columbia,	3	Sharon,	12
Earl Township,	25	Stoneboro,	2
East Earl Township,	2	MONROE COUNTY	
Elizabethtown,	183	Canadensis,	6
Ephrata,	7	Gilbert,	3
Fulton Township,	3	Stroudsburg,	16
Gordonville,	1	MONTGOMERY COUNTY	
Kauffman Park,	2	Abington,	5
Lancaster,	4	Arcola,	15
Landisville,	3	Blue Bell,	3
Leacock,	18	Bridgeport,	1
Ledger,	1	Bethayres,	4
Little Britain Township,	2	Bryn Athyn,	34
Litz,	8	Cheltenham,	1
Manheim Township,	8	Collegeville,	3
Mastersonville,	4	East Greenville,	5
New Holland,	13	Hathoro,	6
Pequea,	17	Hatfield,	3
Penn Township,	3	Jenkintown,	8
Rapho Township,	1	Lafayette,	5
Rocky Springs,	2	Limerick Township,	9
Salisbury Township,	3	Lower Gwynedd Township,	2
LAWRENCE COUNTY		Lower Merion Township,	3
Ellwood City,	6	Lower Pottsgrove Township,	1
Moravia,	3	Lower Providence,	3
New Castle,	2	Lower Salford Township,	7
New Wilmington,	5	Meadowbrook,	5
Plain Grove Township,	3	Noble,	1
Wampum,	7	Norristown,	301
LEBANON COUNTY		Perkiomen Township,	5
Colebrook,	161	Plymouth, Township,	3
Fairland,	4	Pottstown,	2
Jonestown,	3	Rosemont,	2
Lebanon,	14	Royersford,	1
Millcreek Township,	4	Rydal,	2
Mt. Gretna,	129	Schwenksville,	1
South Annville Township,	3	Skipackville,	35
LEHIGH COUNTY		Souderton,	6
Allentown,	279	Trappe,	6
Cementon,	6	Upper Providence,	2
Coopersburg,	1	West Conshohocken,	5
Fullerton,	1	Willow Grove,	36
Stinesville,	1	Worcester,	13
LUZERNE COUNTY		Wyncote,	5
Drifton,	4	MONTOUR COUNTY	
Freeland,	94	Danville,	329
Huntington Valley,	6	Liberty Towuship,	3
Hunlock Township,	4	NORTHAMPTON COUNTY	
Jeddo,	6	Easton,	6
Nescopeak,	4	Fountain Hill,	3
Patterson Grove,	5	Freemansburg,	6
White Haven,	4	Glendon,	4
Wilkes-Barre,	3	Hellertown,	7
LYCOMING COUNTY		Northampton Heights,	1
Bald Eagle,	3	Sandt's Eddy,	6
Barbours,	1	South Bethlehem,	32
Clinton Township,	3		
McIntyre Township,	1		
Montgomery,	9		

NORTHUMBERLAND COUNTY

Northumberland,	11
Point Township,	1
Sunbury,	17
Terworton,	4

PERRY COUNTY

Blain,	5
Center,	1
Green Park,	11
Marysville,	21
Spring Township,	4
Summerdale,	9

PHILADELPHIA COUNTY

Springfield Water Co.,	239
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POTTER COUNTY

Austin,	216
Hebron Township,	1
Shingle House,	2

SCHUYLKILL COUNTY

Frackville,	3
Heppler,	3
Klingerstown,	5
New Ringgold,	3
Nuremberg,	2
Pine Grove,	9
Pottsville,	7
Schuylkill Haven,	3
South Manheim Township,	7
Tamaqua,	6
Tower City,	20
Valley View,	6
Zerbe,	2

SOMERSET COUNTY

Berlin,	4
Black Township,	3
Boswell,	17
Brothers Valley Township,	1
Confluence,	8
Fair Hope Township,	2
Elk Lick,	1
Greenville Township,	1
Hollsopple,	4
Hooversville,	3
Jerome,	8
Rockwood,	1
Stony Creek,	3
Somerset,	5

SUSQUEHANNA COUNTY

Dimock,	5
Springville,	3
Montrose,	6
Susquehanna,	2

TIOGA COUNTY

Antrim,	2
Charleston,	4
Jackson Summit,	7
Lloyds,	6
Morris Township,	6
Nelson,	3
Wellsboro,	5
Westfield,	6

UNION COUNTY

West Buffalo Township,	2
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VENANGO COUNTY

Emlenton,	6
Franklin,	16
Polk,	187
Utica,	2

WARREN COUNTY

Irvine,	5
Lander,	1
Tidioute,	3
Warren,	82
Youngsville,	6

WASHINGTON COUNTY

Amwell Township,	4
Amity,	1
Canonsburg,	12
Ellsworth,	12
Florence,	4
Jefferson Township,	3
Marianna,	6
Millsboro,	4
Riverview,	3
Washington,	15

WAYNE COUNTY

Cold Spring,	4
Farview,	6
Texas Township,	2

WESTMORELAND COUNTY

Alverton,	7
Derry,	13
Forbes Road,	2
Latrobe,	10
Ligonier,	13
Monessen,	50
Mt. Pleasant,	1
New Kensington,	4
Scottdale,	80

WYOMING COUNTY

Tunkhannock,	6
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YORK COUNTY

Codus Township,	1
Dillsburg,	12
Dover,	5
East Prospect,	3
Fawn Grove,	3
Hanover,	2
Heidelberg Township,	3
Hellam Township,	6
Manchester,	10
Monaghan Township,	4
Peach Bottom Township,	1
Parke,	3
Poor Farm,	3
Springetsbury Township,	2
Thomasville,	3
Warrington Township,	4
Wellsville,	3
Wrightsville,	9
York,	2

J—Feces:—One hundred and sixty-eight specimens of feces were received, four of which were unfit for examination. Sixty-one were examined for the presence of tubercle bacilli, among which twenty-eight were positive and thirty-three negative.

For the presence of the typhoid-colon-dysentery group of organisms eighty-eight specimens were examined. In eighty-seven of these the organisms were not found. In one case, however, *B. typhosus* was isolated from the feces.

Ten specimens were examined for intestinal parasites. In none of these were they found.

A request for examination for the presence of blood was made in two cases of suspected duodenal ulcer. In both examinations, the test for blood was positive.

Two examinations at different times of as many specimens in a case of suspected carcinoma of the sigmoid were made and search for epithelial cell nests and occult blood failed to reveal either.

The *B. enteritidis* was isolated from one case of acute bacillary dysentery.

K—Miscellaneous Specimens:—We received 385 specimens of a miscellaneous character. Sixteen of these were unfit for examination. Of the 369 actually examined, a search for the *Mycobacterium diphtheriae* was made in 332. In 158 these organisms were present, while 174 were reported as negative.

A search for *Bacillus anthracis* was made in specimens from two human cases of suspected anthrax. From the serum from the vesicles of one of these cases, sent in by Dr. B. F. Sharpless of Catawissa, anthrax bacteria were isolated of such virulence as to kill in thirty-six hours a guinea pig of three hundred grams. The patient was a man of forty-one years who had contracted the disease in skinning the hide from a sick cow. In the other specimen no anthrax bacilli or spores were found, though the *Staphylococcus pyogenes aureus* was isolated in pure culture.

Examination in five cases of suspected foot and mouth disease in human beings was made. *Staphylococcus* was present in pure culture.

In determining the kinds of organisms present in one specimen from a suppurating ear, the *Staphylococcus pyogenes aureus* was found in pure culture.

Examination of one specimen of a soiled dressing from a case of suspected tetanus failed to reveal the presence of *B. tetani* or its spores. No symptoms of tetanus were observed in laboratory animals inoculated with a portion of the material.

A culture of the blood in one case for the determination of the character of bacteria therein present showed the presence of *Staphylococcus albus* and spore-forming bacteria of the subtilis type but no organisms of the typhoid-colon-dysentery group were found.

Tubercle bacilli were sought for in five specimens consisting of swabbings from the throat and were found in four of them.

Tubercle bacilli were not found in two specimens of blood examined to determine their presence.

The organism of Vincent's Angina was present in one throat swab received for examination.

Streptococci in pure culture were found in one specimen of pseudo-membrane from the throat.

A leucocyte count was made of a blood smear in one case of suspected typhus fever.

B. leprae was found in smears from sores in the nostril, on the tongue, and on an ear lobe of a case of leprosy. None was found in the blood of this patient.

Thirteen specimens of oysters and oyster juice were examined for the presence of members of the typhoid-colon-dysentery group. Colon bacilli were found in all of them and *B. typhosus* was isolated from one of seven specimens, which were collected by one of the inspectors of the Pennsylvania Department of Health at grocery stores in Grove City. In the six specimens from Lancaster, *B. typhosus* was not found though *B. coli* was found in all.

In three specimens of the sediment from the reservoir of the Freeland Water Company and in one specimen of cotton used for two days as a filter in the mouth of a rain spout from the hanging gutter on a house in Freeland, where the rain water from the roof was conducted to a cistern from which the family used water for drinking and cooking, no organisms of the typhoid-colon-dysentery group were found.

S—Wassermann Reactions:—This work was commenced June 1st, the specimens of blood being sent to the Laboratory from the Tuberculosis Dispensaries maintained by the Department. Eighteen gave a positive, sixty-four a negative reaction and eleven were unfit for examination. The memoranda of these specimens are noted in the table which follows:

WASSERMANN TESTS—1914.

Specimen.	No. of Specimens from this Patient.	Sex.	Color.	Age.	Nativity.	Conjugal Condition.	Occupation.	Result.
Blood.	First.	Female.	White.	40	Foreign.	Married.	Housewife.	Positive.
Blood.	First.	Male.	White.	42	Foreign.	Married.	Housewife.	Negative.
Blood.	First.	Female.	White.	45	Native.	Married.	Housewife.	Negative.
Blood.	First.	Male.	White.	31	Foreign.	Widower.	Miner.	Negative.
Blood.	First.	Male.	White.	40	Native.	Married.	None.	Negative.
Blood.	First.	Male.	White.	36	Foreign.	Married.	Miner.	Negative.
Blood.	First.	Male.	White.	30	Foreign.	Married.	Laborer.	Negative.
Blood.	First.	Male.	White.	72	Foreign.	Widower.	Teamster.	Negative.
Blood.	First.	Female.	White.	22	Foreign.	Single.	Housework.	Negative.
Blood.	First.	Female.	Black.	50	Foreign.	Married.	Housework.	Negative.
Blood.	First.	Female.	White.	25	Foreign.	Married.	Housework.	Negative.
Blood.	First.	Male.	White.	27	?	?	?	Negative.
Blood.	First.	Female.	White.	40	Native.	Married.	Housework.	Negative.
Blood.	First.	Male.	White.	20	Foreign.	Single.	Laborer.	Negative.
Blood.	First.	Female.	White.	30	Foreign.	Married.	Housework.	Negative.
Blood.	First.	Female.	White.	40	Foreign.	Married.	Housework.	Negative.
Blood.	First.	Male.	White.	45	Native.	Married.	Livery.	Negative.
Blood.	First.	Male.	White.	47	Foreign.	Married.	?	Positive.
Blood.	First.	Female.	White.	42	Native.	Married.	Housework.	Positive.
Blood.	First.	Female.	White.	53	Native.	Single.	Housework.	Positive.
Blood.	First.	Male.	White.	54	Native.	Married.	Butcher.	Negative.
Blood.	First.	Female.	White.	32	Native.	Married.	Housework.	Negative.
Blood.	First.	Male.	White.	38	Native.	Married.	Machineist.	Negative.
Blood.	First.	Male.	White.	24	Native.	Single.	Chickener.	Negative.
Blood.	First.	Female.	White.	31	Foreign.	Married.	Housework.	Positive.
Blood.	First.	Female.	White.	36	Native.	Married.	Housework.	Negative.
Blood.	First.	Female.	White.	34	Native.	Married.	Housework.	Negative.
Blood.	First.	Female.	White.	38	Foreign.	Married.	Housework.	Negative.
Blood.	First.	Female.	White.	45	Native.	Married.	Carpenter.	Negative.
Blood.	First.	Male.	White.	35	Native.	Single.	Salesman.	Negative.
Blood.	First.	Male.	Black.	30	Native.	Married.	Elevator operator.	Negative.
Blood.	First.	Male.	Black.	36	Native.	Single.	Hardwood finisher.	Positive.
Blood.	First.	Male.	White.	37	Native.	Single.	Inhorer.	Negative.
Blood.	First.	Male.	White.	52	Native.	Widower.	Housework.	Negative.
Blood.	First.	Female.	White.	33	Native.	Married.	None.	Negative.
Blood.	First.	Female.	White.	?	Native.	Single.	None.	Negative.
Blood.	First.	Female.	Black.	29	Foreign.	Married.	Housework.	Negative.
Blood.	First.	Male.	Black.	32	Native.	Single.	Cabinet maker.	Negative.
Blood.	First.	Female.	Black.	32	Native.	Married.	Seamstress.	Negative.
Blood.	First.	Female.	Black.	31	Native.	Married.	Day work.	Undf.
Blood.	Second.	Female.	Black.	31	Native.	Married.	Pay work.	Undf.
Blood.	First.	Female.	Black.	30	Native.	Widow.	Housework.	Negative.
Blood.	First.	Female.	Black.	33	Native.	Married.	Housework.	Negative.

WASSERMANN TESTS—1914—Continued.

Specimen.	No. of Specimens from this Patient.	Sex.	Color.	Age.	Nativity.	Conjugal Condition.	Occupation.	Result.
Blood.	First.	Female.	White.	32	Native.	Married.	Housework.	Negative.
Blood.	First.	Female.	White.	14	Native.	Single.	Assists housework.	Unfit.
Blood.	First.	Male.	White.	42	Native.	Single.	Electrotypist.	Positive.
Blood.	Second.	Male.	White.	42	Native.	Single.	Electrotypist.	Positive.
Blood.	First.	Male.	White.	28	Foreign.	Married.	Laborer.	Positive.
Blood.	First.	Male.	White.	5	Native.	Single.	?	Positive.
Blood.	Second.	Male.	White.	5	Native.	Single.	?	Positive.
Blood.	First.	Female.	White.	50	Native.	Single.	Timberman.	Unfit.
Blood.	First.	Female.	White.	50	Native.	Widow.	?	Unfit.
Blood.	Second.	Female.	White.	47	Native.	Widow.	?	Unfit.
Blood.	First.	Male.	White.	?	Native.	Married.	Scrub woman.	Negative.
Blood.	First.	Male.	Black.	34	Native.	Single.	Salesman.	Positive.
Blood.	First.	Male.	Black.	33	Native.	Married.	Miner.	Positive.
Blood.	First.	Male.	White.	46	Foreign.	Married.	?	Positive.
Blood.	First.	Female.	White.	36	Foreign.	Married.	Miner.	Negative.
Blood.	First.	Female.	White.	30	Native.	Single.	Housework.	Unfit.
Blood.	First.	Male.	White.	64	Foreign.	Married.	Housework.	Negative.
Blood.	First.	Male.	White.	35	Foreign.	Married.	Miner.	Negative.
Blood.	First.	Male.	White.	45	Foreign.	Married.	Bar tender.	Negative.
Blood.	First.	Male.	White.	43	Foreign.	Married.	?	Negative.
Blood.	First.	Male.	White.	36	Foreign.	Married.	Laborer.	Negative.
Blood.	First.	Female.	White.	39	Foreign.	Married.	None.	Negative.
Blood.	First.	Female.	White.	29	Foreign.	Married.	Housework.	Negative.
Blood.	First.	Male.	White.	42	Foreign.	Married.	Housework.	Negative.
Blood.	Second.	Male.	White.	44	Foreign.	Married.	Miner.	Unfit.
Blood.	First.	Male.	White.	22	Native.	Single.	Farmer.	Unfit.
Blood.	First.	Male.	White.	22	Native.	Single.	Steel worker.	Negative.
Blood.	First.	Male.	White.	22	Native.	Single.	Housework.	Negative.
Blood.	First.	Male.	White.	23	Native.	Single.	Clerk.	Unfit.
Blood.	First.	Female.	White.	23	Native.	Single.	Chamber.	Negative.
Blood.	First.	Female.	White.	20	Native.	Single.	None.	Unfit.
Blood.	First.	Male.	White.	?	?	?	Bookkeeper.	Positive.
Blood.	First.	Female.	White.	25	Native.	Single.	Stenographer.	Negative.
Blood.	First.	Female.	White.	33	Native.	Married.	Housework.	Negative.
Blood.	First.	Female.	White.	35	Native.	Married.	Housework.	Negative.
Blood.	First.	Male.	White.	40	Foreign.	Married.	?	Negative.
Blood.	First.	Male.	White.	40	Foreign.	Married.	Laborer.	Negative.
Blood.	First.	Male.	White.	55	Native.	Married.	Teamster.	Positive.
Blood.	First.	Female.	White.	32	Native.	Married.	Housework.	Negative.

Blood	First	Male	White	50	7	?	Blacksmith	Negative
Blood	First	Male	White	50	Native	?	Steel worker	Negative
Blood	First	Male	Black	25	Native	Single	7	Positive
Blood	First	Female	White	40	Native	Single	Housework	Negative
Blood	First	Female	White	26	Native	Single	Housework	Unlt.
Blood	First	Female	White	37	Native	Single	Housework	Negative
Blood	First	Female	Black	52	Native	Married	Housework	Negative
Blood	First	Female	White	31	Native	Single	None	Negative
Blood	First	Female	White	42	Native	Widow	Housework	Positive
Blood	First	Female	White	33	Native	Married	Housework	Negative

Concerning certain specimens noted above the following details are of some interest. In a small outbreak of intestinal disease at Warren, during August, one specimen of blood gave a positive agglutination reaction with *B. typhosus*; one with *B. typhosus* and *B. enteritidis*; two with *B. typhosus* and *B. paracoli*; one with *B. typhosus*, *B. paracoli* and *B. enteritidis*; and one with *B. paracoli* and *B. enteritidis*. None of these organisms was recovered from the feces or urine.

In the Freeland epidemic in August ten bloods gave a positive agglutination reaction to *B. coli*; two to *B. typhosus* and *B. coli*. *B. typhosus* or other pathogen was not recovered from the feces or urine.

In the epidemic of intestinal disease at Lehigh University, the infection was traced to a negro dishwasher employed as a washer of silver and glassware and also as an assistant in the preparation of food. His blood serum agglutinated *B. typhosus* and *B. paratyphosus B*, but we could not recover either microorganism from his feces or urine.

In the epidemic at Grove City, twenty-nine bloods gave a positive Widal to *B. typhosus*; one to *B. typhosus* and *B. enteritidis*; two to *B. typhosus* and *B. paratyphosus A*; two to *B. typhosus*, *B. paratyphosus A* and *B. paracoli*; and one to *B. paratyphosus A* only.

During the year, 20654 packages of Tubercle Bacilli Products were made and sent out to the different State Dispensaries for Tuberculosis and to the Sanatoria of the Pennsylvania Department of Health. Of these packages, 18396 consisted of syringes or ampoules containing one dose of Tubercle Bacilli Extract or the "Fluid of Dixon," while 2258 consisted of syringes or ampoules of Suspension of Dead Tubercle Bacilli (Degreased).

RESEARCH WORK.

Two researches conducted in the Laboratories by direction of Dr. Dixon are here presented. A few of the observations were continued for a couple of weeks beyond the close of the calendar year covered by this report, but were concluded before the material was ready to go to the printer.

I. EXPERIMENT TO DETERMINE THE CURATIVE PROPERTIES OF EMETIN HYDROCHLORIDE WHEN INJECTED SUBCUTANEOUSLY INTO GUINEA PIGS INFECTED WITH TUBERCLE BACILLI.

In view of the fact that several investigators have reported good results in the treatment of pulmonary tuberculosis by the subcutaneous injection of emetin, it was determined to make a trial of its curative properties when injected into guinea pigs.

Twelve guinea pigs, therefore, were injected with 0.0001 gm. tubercle bacilli (Human Culture No. 2) subcutaneously on October 26, 1914. Two weeks after this inoculation, treatment was begun on eleven of these animals by injecting under the skin of the flank one-fortieth of a grain, or 0.00162 gm. of emetin every Monday and Thursday, until the animals died. One pig of the dozen injected with tubercle bacilli was kept as control and received no injection of emetin.

The following table is offered to show the inefficiency of this method of treatment of tuberculosis in guinea pigs. With the exception of one pig, No. 1643, the control, No. 1638, was in better condition longer and lived longer than the pigs which received treatment.

EXPERIMENT WITH INJECTIONS OF EMETIN FOR TUBERCULOSIS.

Number of pig.	Infection of bacilli.	Injections of Emetin Hydrochloride (1.62 mg.)														Date of death.	Cause of Death.			
		November.							December.									Jan. (1915).		
		23	30	3	7	10	14	17	21	24	28	31	4	7	11	14				
1635	0.1 mg.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Jan. 5 (1915),	Generalized tuberculosis.		
1636	0.1 mg.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Jan. 12 (1915).	Generalized tuberculosis.		
1637	0.1 mg.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Dec. 14,	Generalized tuberculosis.		
1638	0.1 mg.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Jan. 26 (1915).	Caseous tuberculosis of liver and spleen. Acute enteritis.		
1639	0.1 mg.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Nov. 19,	General peritonitis. Military tubercles in liver and spleen.		
1640	0.1 mg.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Dec. 11,	Generalized tuberculosis.		
1641	0.1 mg.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Dec. 17,	Generalized tuberculosis.		
1642	0.1 mg.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Dec. 9,	Generalized tuberculosis.		
1643	0.1 mg.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Jan. 30 (1915),	Generalized tuberculosis.		
1644	0.1 mg.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Dec. 4,	Generalized tuberculosis.		
1645	0.1 mg.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Jan. 4 (1915),	Generalized tuberculosis.		
1646	0.1 mg.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Dec. 18,	Generalized tuberculosis.		

The only conclusion which can be drawn from this experiment is that emetin hydrochloride is of no benefit in the treatment of tuberculosis in guinea pigs.

II. ACTION OF HYPOCHLORITE OF LIME AND COPPER SULPHATE ON AMOEBAE.

Amoebae and paramecia—both active—along with great numbers of bacteria were found in abundance in a wooden keg, which contained rain water, dead leaves, and hay.

Attention was given only to the amoebae and paramecia.

Some of this water from the keg, which on microscopic examination was found to contain vast numbers of these animalculae, was taken in a flask and placed in the incubator at 37.5°C. where these organisms maintained their activity unimpaired.

Hypochlorite of lime and copper sulphate respectively were added to portions of this water in six different tubes in the proportions of 1 part of the chemical to 10,000 of the water, 1:100,000 and 1:1,000,000.

After ten hours amoebae and paramecia were active in all three dilutions of chlorinated lime as was also the case in the three tubes containing copper sulphate in the three dilutions above mentioned.

At the end of twenty-four hours and of forty-eight hours in the incubator, the result was the same as regards the amoebae with the three dilutions containing the hypochlorite, and with those containing copper sulphate. The paramecia, however, were becoming sluggish in their movements. At the seventy-two hour period the sluggishness of the paramecia was more perceptible under the influence of both the lime and the copper in all three dilutions of each. No difference in the effect of the lime chlorite as compared with the copper sulphate was apparent nor was there any difference in the activity of the organisms in the three dilutions. After ninety-six hours there was no motility whatever in the 1:10,000 or 1:100,000 dilutions of either chlorinated lime or copper sulphate, but there was still some sluggish motility in the 1:1,000,000 dilution of each chemical. At the end of one hundred and twenty hours, the paramecia were dead in all three dilutions of both the lime and the copper.

The amoebae remained as active as at first in all three dilutions of each chemical at the end of ten days. Copper sulphate had no more effect on their activity than had the hypochlorite of lime, and the observations were discontinued.

In order to prove that the strength of the two chemicals was not deficient, a test with *B. typhosus* with dilutions of 1:10,000, 1:100,000 and 1:1,000,000 of each chemical was made.

As control, one cubic centimeter of a 1-10,000 dilution of a twenty-four hour culture of *B. typhosus* gave 162 colonies on the agar plate after incubation for forty-eight hours. Plating after contact with the chemicals for three hours gave, after incubation for forty-eight hours, the following results for the cubic centimeter.

The culture of *B. typhosus* after contact in the manner above described, with a

Dilution	of the Hypochlorite of Lime	or Copper Sulphate
1:10,000	developed 4 colonies	developed 2 colonies
1:100,000	developed 10 colonies	developed 4 colonies
1:1,000,000	developed 420 colonies	developed 4 colonies

The effective strength of the two chemicals used in the amoebae experiment is thus shown in the above test with *B. typhosus*. Another thing is also suggested in this test and that is: that copper sulphate is a more efficient bactericide than chloride of lime though there is no apparent advantage of one over the other as an amoebicide.

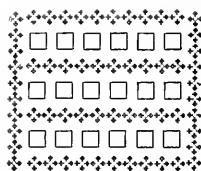
DIVISION FOR THE CONTROL OF TUBERCULOSIS.

KARL SCHAEFFLE, M. D., *Medical Inspector of Dispensaries (Acting).*

FRED. C. JOHNSON, M. D., *Medical Director of the Pennsylvania State Sanatorium for Tuberculosis, No. 1, Mont Alto.*

WILLIAM G. TURNBULL, M. D., *Medical Director of the Pennsylvania State Sanatorium for Tuberculosis, No. 2, Cresson.*

THOMAS H. A. STITES, M. D., *Medical Director of the Pennsylvania State Sanatorium for Tuberculosis, No. 3, Hamburg.*



SUBDIVISION OF TUBERCULOSIS DISPENSARIES.

KARL SCHAEFFLE, M. D., *Medical Inspector of Dispensaries (Acting)*.

The year 1914 was characterized by a general increase in the activity of the system of Tuberculosis Dispensaries. This was due, probably, to the business depression, for which the year was notable, resulting in the economic conditions conducive to Tuberculosis; also to greater knowledge on the part of the laity and medical profession of the facilities afforded by the State for the cure and prevention of this disease.

The opening of the Hamburg Sanatorium stimulated the interest of the people of Eastern Pennsylvania and made admission to a Sanatorium possible to a greater number of Dispensary patients. On the first of January, 1914, there were 8,252 patients enrolled in the State Dispensaries, which was increased by December thirty-first, to 9,638. New Dispensaries were established at Ardmore, Montgomery County, and Hamburg, Berks County, making the total number of Dispensaries 118, physicians 194, and nurses 122. The Dispensary in Tioga County was moved from Tioga to Wellsboro.

During the year there were 4,729 applications from Dispensary patients for Sanatorium treatment. These were classified at the central office according to the physical condition of the patients recorded on charts which are forwarded with the applications. This is done to determine whether admission to Camp or Infirmary is more suitable. Preliminary and final notices were sent to each of these applicants, giving date of admission and the route and train schedule necessary to reach the nearest Sanatorium.

Seventy-one inspections of Dispensaries were made, with reports upon the fitness of physicians and nurses, the amount and character of their work, the local problems of the Dispensary communities and the physical condition of Dispensary rooms and property. The work of the nurses was greatly increased by the inauguration of a "follow-up" system for former Dispensary patients in addition to that established for patients discharged from the Sanatoria. A supplementary report on this work will follow.

The Dispensary statistics, particularly those recorded on the graphic chart, show the increase in the number of nurses' visits to be co-incident with the increase of patients enrolled; also the reduction in the amount of milk served and drugs prescribed, due to the emphasis in instructions to physicians and nurses as to the necessity

for careful discrimination in their use. The tables which record the amount of social work carried on among the families of Dispensary patients are much larger than ever before, indicating the growth of the material side of Dispensary social service.

The Biological Products of the Tubercle Bacillus were used more generally than in former years. A special chart illustrates the pronounced success which has attended the use of this specific agent and the infrequency of ill effects, either locally or systemically in properly selected cases.

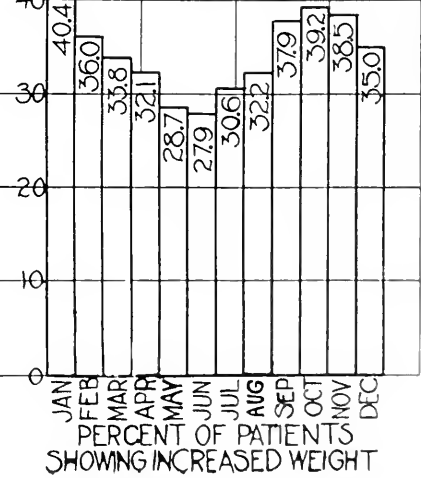
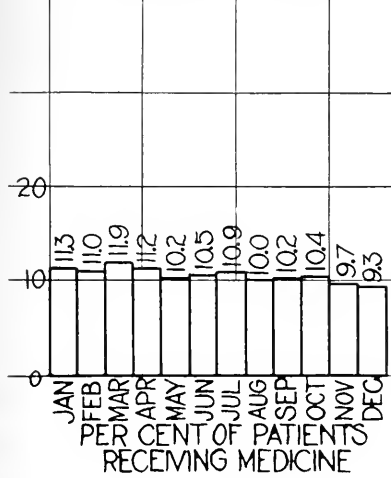
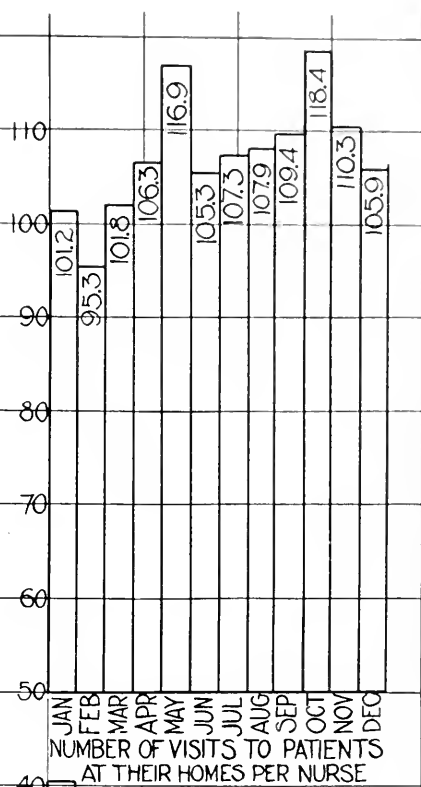
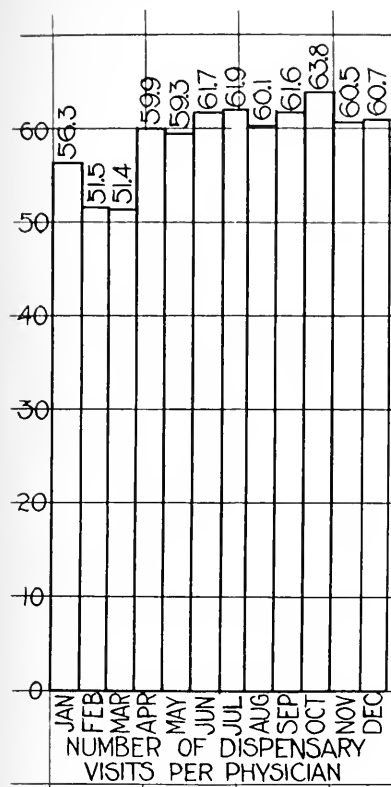
During the year, twenty-nine circular letters of instruction were mailed from the office of the Division to Physicians in Charge of Dispensaries. Other letters, to the number of 14,387, were sent to employers of labor throughout the State, each letter containing detailed information as to the nature of Tuberculosis and the principles of its treatment and prevention. These were accompanied by circulars of information regarding the State's Dispensaries and Sanatoria. The Medical Inspector of Dispensaries was requested to deliver several addresses during the year.

Detailed reports were rendered by Dr. Stites following inspections of the Tuberculosis League Hospital of Pittsburgh, and the Sanatoria at Grand View, Oil City; Bon Air, Bradford; and West Mountain, Scranton.

A special Exhibit, which represented the work of all the Divisions of the State Department of Health, was maintained during the session of the Medical Society of Pennsylvania held at the Carnegie Institute of Pittsburgh in September. The Exhibit was in charge of the Deputy Medical Inspector of Dispensaries, who demonstrated its features to the medical profession, students, and the public.

The most notable change in the personnel of the Division was the transfer of Dr. T. H. A. Stites, who for seven years had been its able Chief, to the Hamburg Sanatorium to become the Medical Director of that Institution. Other changes in the office staff and among the physicians and nurses of our Tuberculosis Dispensaries are noted above in that part of the personal report of the Commissioner which deals with the organization of the Department.

The "Tuberculosis Exhibit" continues to be an important and active agency for the direct dissemination of information of a popular character about the disease which it is the special purpose of this Division of the Department to combat and control. The Exhibit now includes at least a partial presentation of the work of every Division of



the State Department of Health where the work is at all suitable for public exhibition. Such has been the increase of the material capable of utilization for this purpose that five thousand feet of floor space are required for a proper display.

The following account of the field work of the Exhibit, and of the other efforts to carry on an antituberculosis propaganda incidentally connected with it, is taken from the report made by the Lecturer and Manager.

During the year this Exhibit was set up and shown in twenty towns and at seven Agricultural Fairs. It was viewed by one hundred and forty thousand, three hundred persons.

In regular attendance, additional to the Lecturer and Manager, were one male assistant and one nurse. This force was augmented as occasion required by nurses drafted from the State Dispensaries and Sanatoria. In connection with the Exhibit, Department literature was distributed, and frequent illustrated lectures on Tuberculosis were given.

Independent of the exhibit, special Lecture Tours were arranged for the benefit of the Public Schools.

For this purpose rooms which could be darkened in the day time were secured and illustrated talks on the cause and prevention of tuberculosis were given, during school hours, to the pupils of the Public and Parochial Schools, followed by evening lectures on general health measures, to the general public. The hearty cooperation which School Boards and Teachers gave to these talks insured full attendance and added much to the effectiveness of the work.

In large towns and cities, on account of the greater number of pupils, it was usually necessary to make use of a theatre or other public hall. In these instances the talks were given during the morning session when theatrical engagements were not interfered with. During such a period it was possible to give from two to three talks of forty-five minutes duration to classes ranging from fifteen hundred to three thousand.

The Opera House Managers are to be commended for the interest they displayed and the encouragement they rendered. On no occasion was the rental greater than the amount actually necessary to cover light and heating, and in many instances no charge at all was made for the use of the building.

In the course of the year sixty-five school talks were given to thirty-two thousand and twenty-five pupils.

During the interval between the closing of school and the opening of the season for Agricultural Fairs, that portion of the exhibit devoted particularly to Infant Hygiene was displayed in numerous places in connection with locally organized Baby Saving Exhibits. In addition

to talks on Infant Hygiene given by Physicians, practical demonstrations of bathing, clothing, feeding, and caring for Infants were given by the nurses in attendance.

Many interesting details of the activities of the departmental Dispensaries during the past year are set forth by the Chief Visiting Dispensary Nurse in an extended report from which the following abstract is made.

Aided by the Assistant Chief Visiting Dispensary Nurse, two hundred and twenty-four inspections of dispensaries were made. Some dispensaries were visited more frequently than others, because of the occurrence of special conditions, and for the purpose of instructing new nurses.

The instruction of dispensary nurses included the theory and practice of nursing, as applied to the special problem of tuberculosis, and was imparted in the dispensaries, on tours of the homes of patients, and in evening conferences. The social aspect of the tuberculosis problem was emphasized; also the importance of close study of economic conditions and the means for their betterment. Methods of demonstrating preventive measures were discussed and the bed-side care of advanced cases was considered in detail.

The duties of the dispensary nurse consist in assisting the physician in the examination and instruction of patients, and in the clerical work of the dispensary; visiting the home of each patient as soon as possible after the diagnosis and demonstrating in the home the principles taught by the physician in the dispensary; supervising the distribution of the Department's supplies and gaining the cooperation of benevolent agencies of all kinds for the assistance of patients' families.

During the year three thousand two hundred and ninety-eight patients were sent to the Sanatoria* and eleven thousand one hundred and two applied for dispensary treatment, which necessitated an initial visit by a dispensary nurse in each instance; in addition, regular visits were made at intervals of two weeks upon all patients enrolled at the dispensaries. The Department requires a "follow-up" visit to each patient discharged from a Sanatorium, every six months for two years. As two thousand six hundred and nine patients were discharged from the Sanatoria after treatment in the course of the year, the magnitude of this task and the impossibility of going on with it, without a sufficient increase in the number of nurses, may be realized.

*The number of admissions reported by the Sanatoria differs from this number of discharged patients because of the delay in the arrival of patients leaving the Dispensaries at the end of a year.

On account of financial depression, which was very general during the year, excessive demands were made upon the charitable organizations throughout the State, so that these agencies were unable to cooperate with the Dispensaries to the same extent as formerly. It was, therefore, necessary for the nurses to promote entertainments of various kinds in order to provide funds for food and clothing for the families of patients, and fare for the transportation of patients to Sanatoria.

The Grandom Coal Company, of Philadelphia, was of great assistance in supplying coal at half price, but the supply fell short of the demand. Emergency Aid Committees, established in various parts of Pennsylvania, have been instrumental in obtaining employment, as well as food, clothing, and cash.

The milk supplied by the Department as a supplemental food for the tuberculous, has been greatly appreciated. It is the duty of the dispensary nurse to determine the need for it and supervise its use. In many cases, what was designed to be supplemental food, has been the only food the families received. Dispensary nurses have been active in advising economical selection of food stuffs and in demonstrating their preparation.

Through the efforts of our nurses many patients have been moved from congested quarters and city slums to the outskirts of the city, where fresh air finds easy access, this involves a knowledge of real estate conditions, obtained only through repeated inquiries.

Certain educational features have distinguished the activity of some of the dispensaries, such as classes in Domestic Science—including cooking, plain sewing and art needle work—for working girls. The Bristol Dispensary conducts such a class for forty mill girls, who meet once a week. At Tarentum, classes in physical culture and personal hygiene have been conducted for boys and girls, the children of dispensary patients. During the summer months, and, at the time of the Christmas Holidays, outings were provided for tuberculous children—varying from simple picnics to extended visits to the seashore.

Christmas time was characterized by great activity in all of the dispensaries, resulting in many cases in good natured rivalry between neighboring dispensaries. The Christmas spirit found its way into the homes of patients in the form of dinners, clothing, and gifts for adults and children. In several dispensaries Christmas trees were trimmed and a "real Santa Claus" distributed baskets of groceries and toys. In Philadelphia, there were several automobile parties for children, provided by friends of the Dispensaries, which included dinner and the theatre.

At the Harrisburg Dispensary, a special service has been evolved because of its location in regard to the Mont Alto and Hamburg

Sanatoria; this is the furnishing of lodging and breakfast to patients who have arrived from distant sections of the State, on their way to the Sanatorium. By this means the trying journey is broken and patients arrive at the Sanatorium in better condition. Nurses meet patients at the trains, conduct them to the Dispensary, remain on duty through the night, and supervise their departure in the morning. The following is a report of number of cases so handled at Harrisburg during the year:

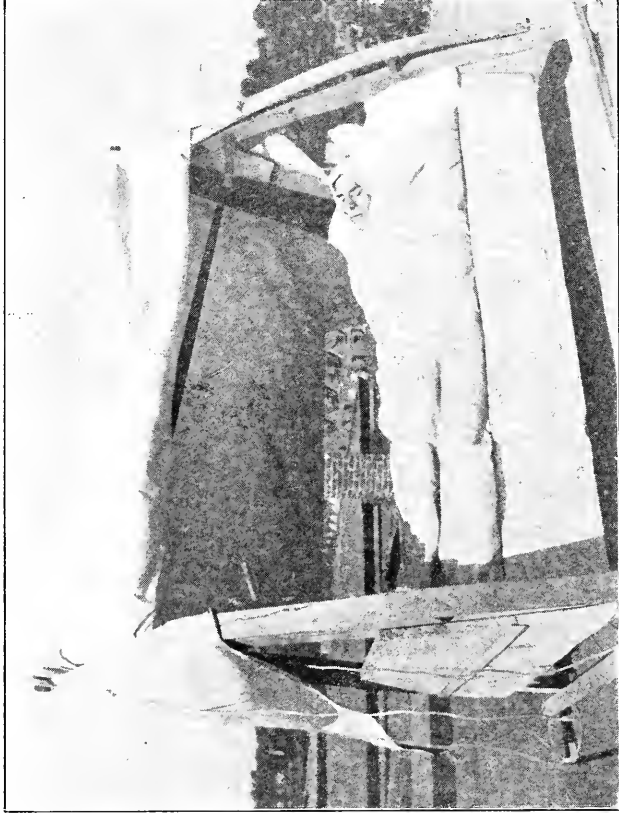
County.	Mont Alto.	Hamburg.
Allegheny,	67	45
Armstrong,	7	3
Beaver,	1	5
Blair, .....	..	3
Bradford,	8	..
Bucks,	1	..
Butler,	5	4
Cambria,	5	7
Cameron,	1	..
Carbon,	2	..
Chester,	1	4
Clearfield,	6	4
Columbia,	1	..
Delaware, .....	..	1
Elk,	7	1
Erie,	6	4
Fayette,	1	..
Greene,	3	1
Indiana,	10	2
Jefferson, .....	..	1
Junia ta,	16	..
Lackawanna,	1	4
Lawrence,	3	..
Lebanon,	4	..
Luzerne,	3	..
Lycoming,	3	3
McKean,	7	3
Mercer,	1	..
Montgomery,	2	..
Montour,	3	..
Northampton,	1	..
Northumberland,	4	..
Philadelphia,	3	..
Potter,	5	..
Schuylkill,	2	..
Somerset,	1	..
Susquehanna,	3	..
Tioga,	8	..
Venango,	8	5
Washington,	15	..
Warren,	3	..
Wayne,	22	1
Westmoreland,	1	..
Wyoming, .....	..	1
York,	2	..
Cresson Sanatorium to	253	99
Total,		

According to instructions received from the Commissioner of Health early in October, the domestic and nursing service of the new Sanatorium, Number Three, located at Hamburg, Berks County, was organized in every detail. Nurses from various Dispensaries were detailed to act as guides during the time the institution was open for public inspection.

The most encouraging result noted by the nurses in the "Follow-up Reports" of former Sanatorium and Dispensary patients was the improvement, not only in physical condition, but in mental attitude. The educational value of their experience was apparent in their changed manner of living—open windows were found to be the rule, and arrangements for sleeping out of doors were more general. There



Sleeping Tent of a Patient of a Dispensary.



Sleeping Methods Found in Use Among Patients of the Dispensaries.



The Sleeping Porch of a Dispensary Patient.



was a notable reform in personal hygiene and home conditions, and a development of an intelligent understanding of the sanitary condition of the places of employment. The attached photographs show what some patients have accomplished. At times, however, patients were found to have grown indifferent to their own condition and careless about the safety of others, and a follow-up visit has been the means of bringing them back to the dispensary, with renewed determination to make a fresh start. There is opportunity in this work for unlimited and varied service, and the work which has been accomplished has, in many ways, been of a high order, but it can never be satisfactory in all respects until there is a nursing force adequate to its needs. At the present time, twenty-five additional nurses are absolutely indispensable.

THE FOLLOWING IS A CONDENSED REPORT OF THE SOCIAL WORK DONE THROUGH OUR DISPENSARIES DURING THE YEAR 1914. LARGELY WITH THE PECUNIARY AID OF CHARITABLE PERSONS AND ASSOCIATIONS.

Patients referred:—

Patients sent to the Dispensaries for treatment or examination through societies, hospitals, physicians, nurses, other patients, newspapers, etc.,	3,110
Patients referred for treatment to institutions other than the State Sanatoria,	768
Patients referred to the various charitable organizations, where they received assistance of all kinds: rent, food, clothing, etc.,	1,472
The number of members of families of patients referred to other organizations,	889

Housing conditions:—

The number of patients whose home surroundings were improved and made more sanitary, or who were removed to more sanitary home was,	65
Number of houses supplied with fly screens,	33

Outdoor living:—

In order to benefit the patients by outdoor living, window hoods, tents, cure chairs, blankets, cots, etc., were secured.	
The amount of money furnished to build tents for patients was,	\$1,188.00
The number of yards of canvas furnished patients for outdoor sleeping tents was,	165
The number of patients for whom sleeping shacks were built was,	3

Seashore and Country:—

The number of patients sent to the seashore or country during the summer months, through the Dispensaries, was,	273
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Children:—

The number of children placed in Institutions so that the mothers could go to Sanatorium was,	4
The number of children attending open air schools,	43
The number of children furnished with eye glasses	6
In some Dispensaries, pensions were secured for patients amounting to approximately thirty dollars a month.	

County Poor Boards:

Orders of relief were obtained through the County Commissioners to the amount of,	\$9,192.44
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Besides the above, many families (some receiving aid every month) were helped through this means, the amount of which is not stated. These orders were often in form of rent, coal, food, etc.

Organized Societies:—

Our patients are aided by different societies, both church and social. The amount of money received from such societies was, \$6,838.15
 Many of our patients are aided by individuals. The amount of money received from charitable persons was, \$2,212.78
 Money thus received was expended for food, rent, sometimes for transportation to Sanatoria.

Transportation to a State Sanatorium:—

Many of our patients referred to the Sanatoria are given transportation by Poor Boards, societies, or individuals. Number of patients receiving such aid (a nurse accompanying them if necessary), 309
 A number of patients were supplied with suitable clothing to go to a Sanatorium.

Employment:—

The number of patients finding suitable employment through Dispensaries at their discharge from the Sanatorium, 347

Miscellaneous Donations.

Clothing:—

The number of pieces of clothing received and distributed among Dispensary patients, including shoes, overshoes, underclothing, dresses, coats, etc.. was, 11,378

Food:—

Value of food supplies received by patients was, \$2,981.65
 Besides this, many families received food (some every week), the value of which is not stated.
 Forty-six families were supplied with Thanksgiving dinners.

Coal:—

Amount of coal received by patients was three hundred and forty-six tons. In addition, many families received coal from various societies, amounts not stated. In other instances, coal was given them at half price.

Bedding and Furniture, etc:—

The number of pieces of bedding distributed was, 504
 The number of necessary pieces of furniture supplied for patients was, 163
 Flowers, old magazines, fruit and ice cream were given by individuals to Dispensary patients.
 The number of Easter baskets given to patients was, 15
 Bolts of flannelette and muslin were donated. amounts not stated.
 Servants were furnished for a number of advanced cases.
 The number of ice tickets furnished during the summer months was 876, a supply of one and three quarter tons. Many other patients were given ice, the quantity not stated.
 A number of baby outfits were furnished Dispensary patients.

Christmas entertainments:—

Christmas was observed by festivities in many of our Dispensaries: trees being trimmed in some of them and gifts distributed among the children. The number of children receiving candy, oranges, toys, gloves, etc., was, 1,488
 Number of families supplied with Christmas dinners by Dispensaries was, 1,160
 In addition, charitable organizations served Christmas dinners to families unable to buy them. Canned fruit, jellies, apples, etc., were also donated.

GENERAL TABLE OF DISPENSARY OPERATIONS FOR THE YEAR 1914

Place.	Dispensary number.	Admissions.	Discharges.	Total treated.	Total dispensary visits by patients.	Remaining December 31, 1914.
		11,102	9,716	19,354	139,746	9,638
Wilkes-Barre,	1	428	348	795	4,702	447
York,	2	149	160	244	1,934	84
Eric,	3	164	128	253	1,112	115
Carlisle,	4	36	47	153	1,659	106
Lebanon,	5	195	103	405	5,171	302
West Chester,	6	5	8	15	214	10
Bellefonte,	7	7	2	7	118	5
Emporium,	8	11	3	17	206	14
Johnstown,	9	235	264	463	2,357	199
Lewistown,	10	27	50	70	347	20
Chambersburg,	11	16	15	34	263	19
Chester,	12	283	277	531	5,313	254
Harrisburg,	13	852	830	1,716	10,535	886
Altoona,	14	86	70	132	952	62
Butler,	15	119	126	276	2,024	150
Berwick,	16	89	57	156	1,601	93
McConnellsburg,	17	0	0	0	0	0
Ironsdale,	18	8	9	17	133	8
Milford,	19	0	0	0	0	0
Pittsburgh,	20	1,012	710	1,503	9,748	783
Philadelphia (Poplar Street),	21	1,336	1,139	1,642	6,075	503
Rochester,	22	39	24	44	390	20
Doylstown,	23	21	23	51	728	28
Kittanning,	24	52	59	100	1,162	41
New Bloomfield,	25	8	4	17	102	13
Mifflintown,	26	56	44	177	649	133
Condersport,	27	0	0	0	0	0
Danville,	28	35	31	63	705	32
Mifflinburg,	29	0	0	0	0	0
Meyersdale,	30	15	22	37	229	15
Norristown,	31	54	57	160	824	43
Oil City,	32	76	84	251	2,636	167
Williamsport,	33	186	176	370	4,091	194
Tionesta,	34	0	0	0	0	0
New Castle,	35	91	80	175	2,079	96
Sharon,	36	109	108	185	776	77
Rending,	37	108	100	148	909	48
Bradford,	38	2	4	6	20	0
Lancaster,	39	79	77	162	1,132	85
Scranton,	40	216	204	487	2,904	283
Mendville,	41	15	12	29	245	16
Ridgway,	42	28	20	71	563	27
Clarion,	43	6	6	9	36	3
Towanda,	44	88	69	131	604	62
Mauch Chunk,	45	7	5	14	131	9
Lock Haven,	46	17	18	26	247	8
Huntingdon,	47	26	23	60	690	27
Indiana,	48	45	39	69	423	21
Montrose,	49	14	17	46	538	29
Selinsgrove,	50	7	11	23	179	12
Allentown,	51	105	93	203	2,314	110
Easton,	52	32	23	74	318	47
Shamokin,	53	45	37	104	863	61
Warren,	54	26	28	45	287	17
Monongahela,	55	48	38	61	352	15
Tunkhannock,	56	33	35	91	769	56
Greensburg,	57	109	96	113	441	47
Tioga,	58	24	25	53	64	28
Dunshoro,	59	7	6	21	210	15
Gettysburg,	60	25	19	46	572	27

GENERAL TABLE OF DISPENSARY OPERATIONS FOR THE YEAR 1914.—
Continued.

Place.	Dispensary number.	Admissions.	Discharges.	Total treated.	Total dispensary visits by patients.	Remaining December 31, 1914.
Everett,	61	28	23	43	299	20
Clearfield,	62	34	29	91	586	62
Waynesburg,	63	8	7	11	144	4
Punxsutawney,	64	36	32	57	354	25
Stroudsburg,	65	3	6	6	35	0
Pottsville,	66	116	86	255	1,571	169
Uniontown,	67	43	38	61	282	23
Hazleton,	68	63	54	115	1,238	61
Hastings,	69	49	47	83	304	36
Connellsville,	70	38	31	51	238	20
Mount Carmel,	71	346	240	657	7,824	417
Franklin,	72	28	24	102	829	78
Jenkintown,	73	32	29	47	466	18
Columbia,	74	20	10	26	203	16
Coatesville,	75	40	34	70	742	36
Phoenixville,	76	70	29	84	784	55
Mount Pleasant,	77	28	29	42	176	13
Lykens,	78	11	13	28	327	15
Tyrone,	79	11	10	24	220	14
Philipsburg,	80	37	78	169	1,325	91
McKeesport,	81	82	79	159	1,528	80
Bristol,	82	30	31	52	316	21
Carbondale,	84	28	17	54	427	37
Shenandoah,	85	377	249	726	4,725	477
Hanover,	86	29	23	80	1,052	57
Bangor,	87	25	11	30	360	19
Monessen,	88	85	83	115	688	32
Lansford,	89	30	24	43	261	19
Titusville,	90	18	14	26	367	12
Tamaqua,	91	14	16	26	162	10
Milton,	92	21	26	66	908	40
Pittston,	94	91	53	259	1,268	206
DuBois,	95	63	71	149	1,757	78
West Fairview,	96	19	13	44	348	31
Susquehanna,	97	7	8	18	250	10
South Bethlehem,	98	104	79	177	1,101	98
Corry,	99	8	8	13	219	11
Homestead,	100	91	57	142	1,456	85
Braddock,	101	106	105	146	935	41
Brookville,	102	20	24	37	191	8
Beaver Falls,	103	32	24	50	619	26
Washington,	105	88	94	133	1,526	99
Pottstown,	106	15	10	23	286	13
Philadelphia (Frankford),	107	390	381	557	4,165	176
Waynesboro,	108	45	37	82	950	45
Wilksburg,	109	185	154	268	1,461	114
Sunbury,	110	50	47	123	1,078	76
Tarentum,	111	64	88	206	1,543	118
Renovo,	112	15	9	30	495	21
Nanticoke,	113	36	38	73	689	35
Brownsville,	114	20	18	27	123	9
Kane,	115	20	16	33	303	17
Ardmore,	117	10	5	10	61	5
Philadelphia (So. 26th Street),	931	920	853	1,185	6,474	332

SUMMARY OF DISPENSARY WORK IN 1914, BY MONTHS.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Number visits by nurses,	12,151	11,152	12,116	12,660	13,679	12,743	12,852	12,829	13,139	14,104	13,354	12,717
*Total enrollment including undiagnosed cases,	8,756	8,856	9,225	9,113	9,886	10,172	10,353	10,475	10,425	10,464	10,156	10,655
Percentage patients receiving milk,	44	44	46	45	44	41	44	42	43	42	43	44
Number quarts milk each month for each patient,	39	29	29	30	31	29	31	30	30	31	29	31
Number dispensary visits for each phys- ician,	57	52	51	60	59	62	62	60	62	64	60	61
Number visits to patients for each nurse, ...	101	95	102	106	117	105	107	108	109	118	110	103
Percentage patients receiving medicine, ...	11	11	12	11	10	11	11	10	10	10	10	9
†Percentage tuberculous patients showing increased weight,	46	36	34	32	29	28	31	32	38	39	39	35

*Includes persons under observation or applicants found on examination to be non-tuberculous. There were 4,692 such cases during the year; a monthly average of 391.

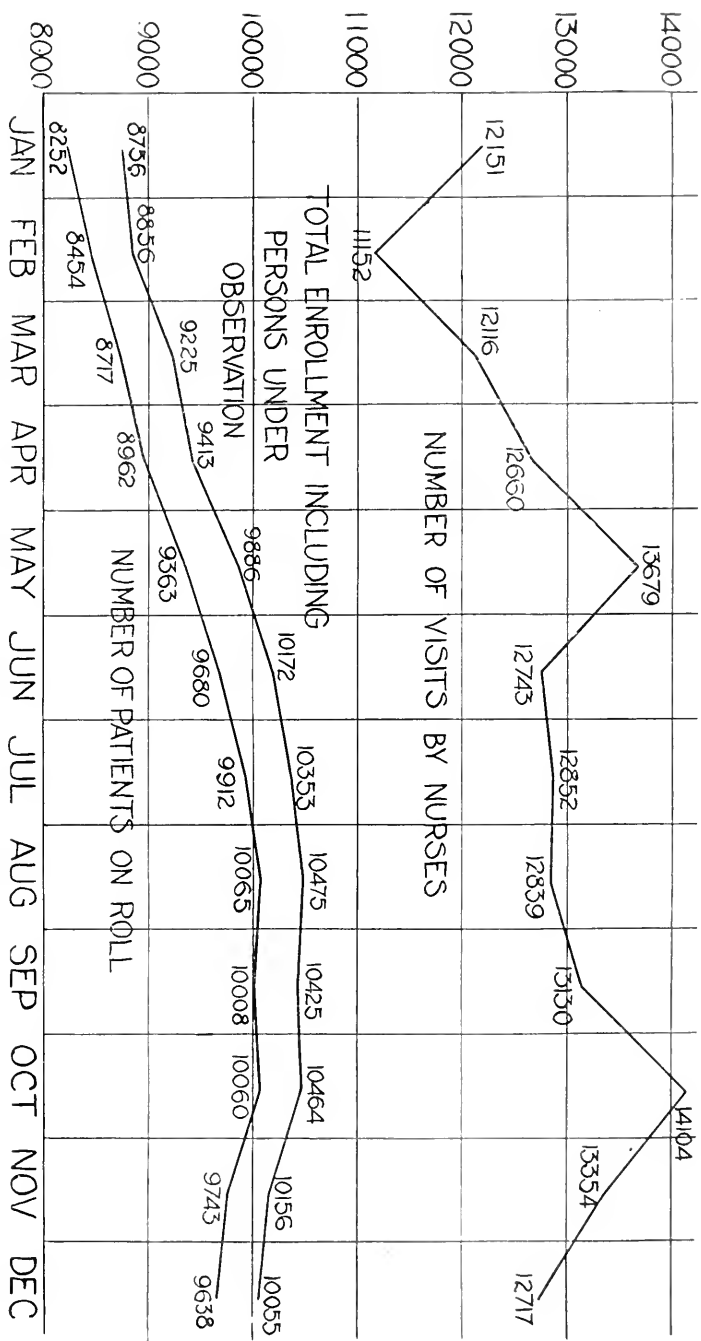
†Obtained by comparing the number of increases in weight with the number of patients enrolled at the end of the month. The relation of these percentages is shown in the charts.

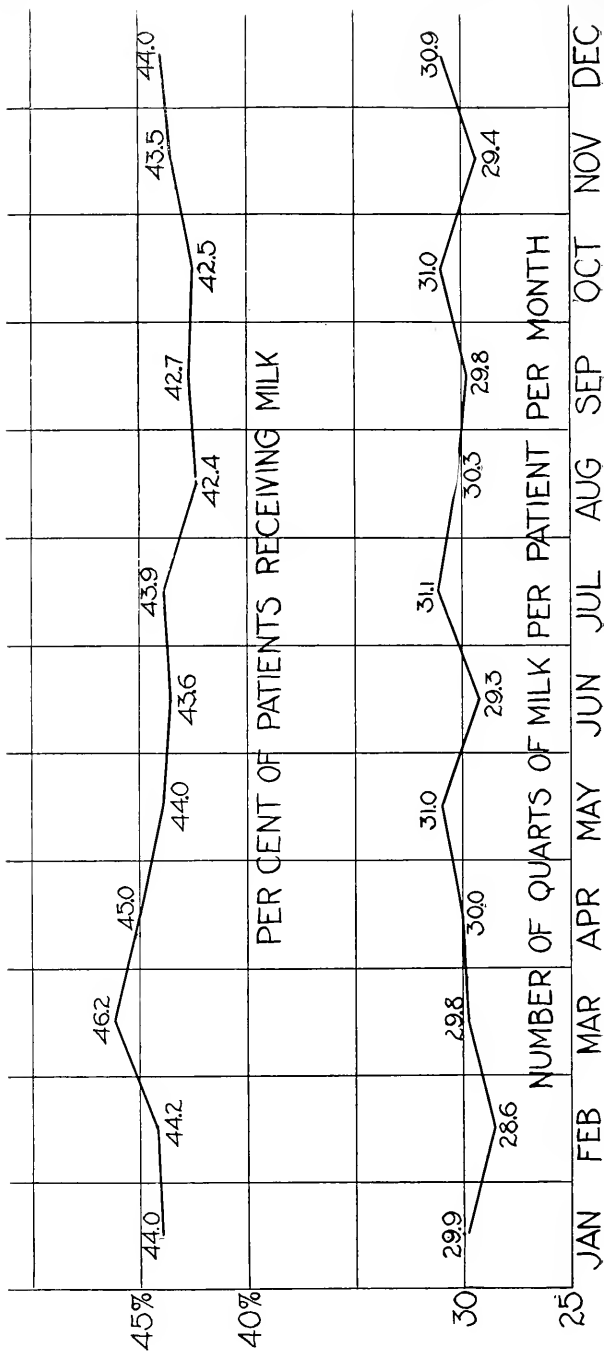
OCCUPATIONS AND NATIVITY OF DISPENSARY PATIENTS WHO WERE DISCHARGED DURING 1914.

Summary.	Total.	Native.	Foreign.
MALES.			
Classified by occupations,	4,293	2,812	1,481
Occupation not stated,	101	67	34
No occupation,	130	116	14
Under occupational age,	846	826	20
All males,	<u>5,370</u>	<u>3,811</u>	<u>1,549</u>
FEMALES.			
Classified by occupations,	3,196	2,483	713
Occupation not stated,	135	123	7
No occupation,	67	59	8
Under occupational age,	948	926	22
All females,	<u>4,346</u>	<u>3,596</u>	<u>750</u>
Total cases,	<u>9,716</u>	<u>7,417</u>	<u>2,299</u>

DETAILED LIST OF DISPENSARY PATIENTS DISCHARGED DURING 1914, BY SEX, OCCUPATION, AND NATIVITY.

MALES.	Total.	Native.	Foreign.
PROFESSIONAL GROUP (TOTAL),	<u>62</u>	<u>54</u>	<u>8</u>
Architects, artists, teachers of arts,	1	1	0
Clergymen,	1	0	1
Engineers, surveyors,	4	4	0
Journalists,	0	0	0
Lawyers,	1	1	0
Musicians, teachers of music,	7	6	1
Physicians, surgeons,	6	6	0
Teachers (school),	0	0	0
Others of this class not specified,	42	36	6
CLERICAL AND OFFICIAL GROUP (TOTAL),	<u>276</u>	<u>247</u>	<u>29</u>
Bookkeepers, clerks, copyists,	184	166	18
Bankers, brokers, officials of companies,	6	6	0
Collectors, agents, auctioneers,	6	5	1
Others of this class not specified,	80	70	10
MERCANTILE AND TRADING GROUP (TOTAL),	<u>181</u>	<u>106</u>	<u>75</u>
Apothecaries, pharmacists,	0	0	0
Commercial travelers,	76	59	17
Merchants, dealers,	26	10	16
Hucksters, peddlers,	44	13	31
Others of this class not specified,	35	24	11
PUBLIC ENTERTAINMENT GROUP (TOTAL),	<u>61</u>	<u>35</u>	<u>26</u>
Hotel and boarding house keepers,	0	0	0
Saloon keepers, liquor dealers, bartenders,	19	12	7
Others of this class not specified,	42	23	19
PERSONAL SERVICE GROUP (TOTAL),	<u>169</u>	<u>126</u>	<u>43</u>
Barbers, hairdressers,	47	29	18
Janitors, sextons,	21	17	4
Police-men, watchmen, detectives,	21	12	9
Soldiers, sailors, marines,	8	6	2
Others of this class not specified,	72	62	10





MALES.		Total.	Native.	Foreign.
LABORING AND SERVANT GROUP (TOTAL),		1,085	616	469
Laborers (not agricultural),		1,085	616	469
Servants,		0	0	0
MANUFACTURING AND MECHANICAL INDUSTRY GROUP (TOTAL),		1,504	1,009	495
Bakers, confectioners,	40	16	24	
Blacksmiths,	30	18	12	
Boot and shoe makers,	30	14	16	
Brewers, distillers, rectifiers,	0	0	0	
Butchers,	25	15	10	
Cabinet makers, upholsterers,	3	3	0	
Carpenters, joiners,	102	75	27	
Cigarmakers, tobacco workers,	27	18	9	
Clock and watch repairers, jewelers,	8	5	3	
Compositors, printers, pressmen,	30	27	3	
Coopers,	1	1	0	
Engineers and firemen (not railway),	55	26	19	
Glass blowers, glass workers,	35	30	5	
Hat and cap makers,	1	0	1	
Iron and steel workers,	172	122	50	
Leather makers,	4	3	1	
Leather workers,	21	17	4	
Machinists,	216	166	51	
Marble and stone cutters,	44	24	20	
Masons,	14	9	5	
Mill and factory operatives (textile),	243	164	79	
Millers (flour and grist),	2	1	1	
Painters, glaziers,	83	65	18	
Plasterers,	16	12	4	
Plumbers, gas and steam fitters,	30	22	8	
Tailors,	82	10	73	
Tinners and tinware makers,	17	10	7	
Others of this class not specified,	172	127	45	
AGRICULTURAL AND TRANSPORTATION GROUP (TOTAL),		829	515	314
Boatmen, canalmen,	0	0	0	
Draymen, hackmen, teamsters,	154	124	30	
Farmers, planters, farm laborers,	112	100	12	
Gardeners, florists, nurserymen,	11	8	3	
Livery stable keepers, hostlers,	11	8	3	
Lumbermen, raftsmen,	7	5	2	
Miners, quarrymen,	329	93	236	
Sailors, pilots, fishermen,	1	1	0	
Stock raisers, herders, drovers,	0	0	0	
Steam railroad employees,	144	128	16	
Others of this class not specified,	60	50	10	
All other male occupations,	126	104	22	
Male occupations not stated,	101	67	34	
Males with occupation,	4,293	2,812	1,481	
Males with no statement as to occupation,	101	67	34	
Males with no occupation,	130	116	14	
Males under occupational age,	846	826	20	
All males,	5,370	3,821	1,549	

FEMALES.

Artificial flower and paper box makers,	7	6	1
Bookkeepers, clerks, copyists,	91	85	6
Cigarmakers, tobacco workers,	28	23	5
Dressmakers, seamstresses,	75	60	15
Hotel and boarding house keepers,	1	1	0
Laundresses,	28	24	4
Milliners,	14	10	4
Mill and factory operatives,	296	226	60
Musicians, teachers of music,	4	4	0
Nurses, midwives,	22	19	3
Housewives,	1,884	1,350	494
Housekeepers,	216	168	48
Stenographers, typewriters,	19	16	3
Teachers in schools,	16	16	0
Telegraph and telephone operators,	15	15	0
Servants,	31	285	36
All other occupations,	159	125	34

Female occupations not stated,	135	128	7
Females with no occupations,	3,156	2,483	713
Females with no statement as to occupation,	135	128	7
Females with no occupation,	67	59	8
Females under occupational age,	948	926	22
All females,	4,346	3,596	750

NATIVITY OF PATIENTS ADMITTED AND DISCHARGED DURING 1914.

(a) Native:			
1. Males,	2,351		
2. Females,	1,785	4,136	
(b) Foreign:			
1. Males,	1,133		
2. Females,	472	1,605	5,741

NATIVITY OF PATIENTS ADMITTED PRIOR TO 1914 AND DISCHARGED DURING 1914.

(a) Native:			
1. Males,	1,470		
2. Females,	1,811	3,281	
(b) Foreign:			
1. Males,	416		
2. Females,	278	694	3,975
Summary:			
All males,	5,370		
All females,	4,346		
Total cases,			9,716

SEX AND CLASSIFICATION OF DISPENSARY CASES ADMITTED AND DISCHARGED DURING 1914.

Sex.	Total.	Incipient.	Moderately advanced.	Far advanced.	Unstated.
Total,	5,741	1,497	2,554	1,645	45
Males,	3,484	738	1,584	1,139	23
Females,	2,257	759	970	506	22

SEX AND CLASSIFICATION OF DISPENSARY CASES ADMITTED PRIOR TO 1914 AND DISCHARGED DURING THE YEAR.

Sex.	Total.	Incipient.	Moderately advanced.	Far advanced.	Unstated.
Total,	3,975	1,720	1,725	458	72
Males,	1,886	714	851	285	36
Females,	2,089	1,006	874	173	36

CLASSIFICATION, SEX, AND AGE OF DISPENSARY CASES ADMITTED AND DISCHARGED DURING 1914.

Ages in Years.

Classification.	Sex.	Total.	-5.	5-9.	10-14.	15-19.	20-24.	25-29.	30-34.	35-39.	40-44.	45-49.	50-59.	60+	Un- stated.
Incipient.	{ M.,	5,741	66	273	373	642	925	913	752	603	639	305	324	107	9
	{ F.,		22	87	123	102	113	83	72	58	31	22	21	3	
Moderately advanced.	{ M.,	1,584	22	103	116	114	120	113	65	45	31	20	13		1
	{ F.,		5	43	54	159	223	251	226	132	164	104	123	43	
Far advanced.	{ M.,	1,129	9	31	60	139	137	177	126	94	59	25	39	11	2
	{ F.,		6	4	5	79	107	188	184	154	99	95	116	42	
Unstated.	{ M.,	23		1	1	5	3	3	1	5			2	1	
	{ F.,			1	1	6	3	3	6						1

AVERAGE AGE IN YEARS:

All ages.	28.9	Far advanced.	{ M., 24.8
Incipient.	{ M., 22.3	Unstated.	{ F., 39.1
	{ F., 21.2		
Moderately advanced.	{ M., 31.8	All males.	30.8
	{ F., 27.5	All females.	26.0

CLASSIFICATION, SEX, AND NATIVITY OF DISPENSARY CASES ADMITTED AND DISCHARGED DURING 1914.

Classification.	Sex.		Nativity.										
	M.	F.	Total foreign.	Great Britain.	Ireland.	Germany.	Italy.	Anstro Hungary*.	Russia.	Poland.	Scandinavia.	Other.	
	4,136		1,605	107	174	105	208	398	376	1	1	225	
Incipient,	537		201	11	9	10	34	49	53		1	34	
	622		137	4	10	9	15	33	44			22	
Moderately advanced,	1,052		532	34	45	29	78	135	130			81	
	1,163		207	16	50	21	23	44	50			33	
Far advanced,	745		394	30	55	27	45	107	77	1		52	
	331		125	6	35	9	12	30	21			12	
Unstated,	17		6	5			1					1	
	19		8	1					1				

Total: native, 72 per cent.; foreign, 28 per cent.

*Includes "Slavish."

CLASSIFICATION, SEX, AND SOCIAL CONDITIONS OF DISPENSARY CASES ADMITTED AND DISCHARGED DURING 1914.

Classification.	Sex.	Total.	Single.*	Married.	Widowed.	Divorced.	Separated.	Unstated.
Inclpent,	M.,...	738	490(232)	227	9	1	10	1
	F.,..	759	455(242)	252	33	3	15	1
Moderately advanced,	M.,...	1,584	725(102)	756	62	7	31	3
	F.,..	970	420(100)	448	57	12	33	.....
Far advanced,	M.,...	1,139	512(15)	529	63	5	28	2
	F.,..	506	156(17)	289	40	1	29	.....
Unstated,	M.,...	23	9(2)	5	.....	.....	1	8
	F.,..	22	9(2)	8	1	.....	2	2

*In parentheses appear the members of each group of figures that are under 15 years of age.

CLASSIFICATION, SEX, AND COLOR OF DISPENSARY CASES ADMITTED AND DISCHARGED DURING 1914.

Classification.	Sex.	Total.	Color.				
			White.	Black.	Indian.	Chinese.	Unstated.
		5,741	5,465	264	1	1	10
Inclpent,	M.,...	738	717	21	.....	.....	.....
	F.,..	759	725	32	.....	1	1
Moderately advanced,	M.,...	1,584	1,510	73	.....	.....	1
	F.,..	970	922	47	1	.....	.....
Far advanced,	M.,...	1,139	1,083	55	.....	.....	1
	F.,..	506	491	15	.....	.....	.....
Unstated,	M.,...	23	18	.....	.....	.....	5
	F.,..	22	19	1	.....	.....	2

SEX AND CLASSIFICATION ON DISCHARGE OF DISPENSARY CASES
ADMITTED PRIOR TO JANUARY 1, 1914, AND DISCHARGED DURING
1914.

Classification.	Sex.	Total.	Condition on Discharge.							
			Apparently cured.	Arrested.	Improved.	Progressive.	Dead from tuber- culosis.	Dead from other causes.	Unchanged.	Unstated.
		3,975	81	630	1,848	73	354	55	920	14
Incipient,	M,...	714	17	154	333	9	13	7	119	2
	F,...	1,006	32	292	539	12	22	10	167	2
Moderately advanced,	M,...	851	12	80	386	23	100	14	230	7
	F,...	874	15	146	394	14	75	19	208	3
Far advanced,	M,...	285	1	6	64	10	89	3	112	.....
	F,...	173	2	9	42	6	52	1	61	.....
Unstated,	M,...	36	1	5	13	.....	1	1	15	.....
	F,...	36	1	8	17	.....	2	.....	8	.....

SEX AND CLASSIFICATION ON DISCHARGE OF DISPENSARY CASES
ADMITTED AND DISCHARGED DURING 1914.

Classification.	Sex.	Total.	Condition on Discharge.							
			Apparently cured.	Arrested.	Improved.	Progressive.	Dead from tuber- culosis.	Dead from other causes.	Unchanged.	Unstated.
		5,741	11	95	1,957	117	662	77	2,808	14
Incipient,	M,...	738	.....	22	346	6	13	3	344	2
	F,...	759	.....	35	373	11	11	5	315	2
Moderately advanced,	M,...	1,584	3	14	584	24	139	34	780	6
	F,...	970	.....	22	360	15	73	16	481	1
Far advanced,	M,...	1,139	.....	.....	205	39	278	14	602	1
	F,...	506	1	1	73	21	138	4	268	.....
Unstated,	M,...	23	.....	.....	6	1	7	.....	9	.....
	F,...	22	1	1	5	.....	3	1	9	2

SEX, CLASSIFICATION, AND NATURE OF DISCHARGE OF DISPENSARY CASES ADMITTED PRIOR TO JANUARY 1, 1911, AND DISCHARGED DURING 1914.

Classification.	Sex.	Total.	Moved.	Voluntary discharge.	Sanatorium.	*Family physician.	Disobedience.	Dead from tuberculous losses.	Dead from other causes.	Unstated.
		3,975	528	2,330	539	160	111	356	6	5
Incipient,	M....	744	84	498	78	23	16	12	2	1
	F....	1,666	135	725	71	19	39	12	1	2
Moderately advanced,	M....	851	103	124	179	19	22	101	2	1
	F....	874	131	567	92	32	31	76	1	1
Far advanced,	M....	285	47	56	82	1	10	89	.....	.....
	F....	173	20	62	31	6	1	33	.....	.....
Unstated,	M....	26	4	26	1	.....	1	1	.....	.....
	F....	36	1	32	1	.....	.....	2	.....	.....

*Improved financial circumstances enabled these patients to employ their own physicians.

SEX, CLASSIFICATION, AND NATURE OF DISCHARGE OF DISPENSARY CASES ADMITTED AND DISCHARGED DURING 1914.

Classification.	Sex.	Total.	Moved.	Voluntary discharge.	Sanatorium.	*Family physician.	Disobedience.	Dead from tuberculous losses.	Dead from other causes.	Unstated.
		5,741	861	1,108	2,759	111	193	606	8	5
Incipient,	M....	738	139	230	290	24	40	13	.....	.....
	F....	759	125	284	280	13	30	11	.....	1
Moderately advanced,	M....	1,784	211	250	848	39	60	141	2	3
	F....	970	146	332	468	30	29	74	1	.....
Far advanced,	M....	1,130	139	72	694	18	26	279	1	.....
	F....	566	69	40	250	7	5	138	.....	.....
Unstated class,	M....	23	2	3	10	.....	1	1	.....	.....
	F....	12	.....	7	9	.....	2	3	.....	1

*Improved financial circumstances enabled these patients to employ their own physicians.

CLASSIFICATION, SEX, AND NUMBER OF DISPENSARY VISITS WHILE UNDER TREATMENT, OF THE CASES ADMITTED PRIOR TO JANUARY 1, 1914 AND DISCHARGED DURING 1914.

Classification.	Sex.	Total Cases.	Dispensary Visits.										Un- stated.
			1 to 12.	13-24.	25-30.	31-36.	37-42.	43-48.	49-54.	55-60.	61+.		
		3,975	2,477	689	210	94	72	79	44	87	211	12	
Incipient,	M	714	430	135	39	20	10	14	8	18	39	1	
	F	1,006	528	192	78	30	21	25	17	35	79	1	
Moderately advanced,	M	851	598	156	29	15	15	16	5	14	31	2	
	F	874	515	179	52	19	16	23	11	14	45	.....
Far advanced,	M	285	208	33	5	5	3	1	2	4	3	1	
	F	173	137	18	4	4	5	.....	.....	1	3	.....
Unstated,	M	35	23	4	2	.....	2	.....	.....	.....	2	3
	F	37	18	2	1	.....	.....	.....	.....	.....	9	4

AVERAGE NUMBER DISPENSARY VISITS OF THESE CASES.

All classes,	16.4	Far advanced,	M 8.8	All males,	13.9
Incipient,	M 17.1	Unstated,	F 10.0	All females,	13.7
	F 21.2				
Moderately advanced,	M 14.1				
	F 16.9				

CLASSIFICATION, SEX, AND NUMBER OF DISPENSARY VISITS OF CASES ADMITTED AND DISCHARGED DURING 1914.

Classification.	Total cases.	Number Visits.																								Un- stated	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
Inipient,	5,711	2,056	569	734	525	387	291	133	175		98	41	82	19	20	41	21	6	13	2	12	....	15	1	6	11	
M	738	518	110	90	75	55	51	20	34	13	18	5	23	1	4	8	4	1	....	....	1	....	....	....	....	....	....
F	779	503	132	114	76	53	37	15	30	19	9	13	13	6	5	12	1	1	3	1	6	....	3	....	....	....	....
Moderately advanced,	1,581	493	267	230	176	113	77	50	54	28	38	7	22	5	9	11	4	1	3	....	2	....	....	....	....	....	....
M	970	315	174	129	90	77	51	23	30	16	17	8	12	4	....	7	3	1	3	1	1	....	....	....	....	....	....
F	1,139	598	193	130	75	65	51	17	23	10	12	6	9	3	2	3	3	2	3	....	2	....	....	....	....	....	....
Unstated,	596	280	79	47	33	21	29	8	1	3	5	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
M	23	9	3	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
F	22	12	2	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

AVERAGE NUMBER DISPENSARY VISITS OF THESE CASES.

All classes,	3.5	Far advanced,	M 2.8	All males,	3.5
Incipient,	M 3.9	Unstated,	F 2.9	All females,	3.6
Moderately advanced,	M 3.7				
	F 3.7				

CLASSIFICATION, SEX, AND DISPENSARY MONTHS (TIME UNDER TREATMENT) FOR CASES ADMITTED PRIOR TO JANUARY 1, 1914 AND DISCHARGED DURING 1914.

Classification.	Sex.	Total Cases.	Months.										Un- stated.
			-3.	3-6.	6-9.	9-12.	12-18.	18-24.	24-36.	36-48.	48+.		
		3,975	214	537	550	510	583	460	494	298	308	11	
Incipient,	M	714	16	86	95	86	109	77	117	72	56	.....
	F	1,095	21	85	119	116	153	139	161	114	107	.....
Moderately advanced,	M	851	65	165	134	108	127	91	80	41	39	1	
	F	874	35	109	143	116	145	116	108	64	59	2	
Far advanced,	M	285	59	73	54	30	25	18	18	2	6	.....
	F	178	19	30	36	22	29	25	5	2	5	.....
Unstated,	M	36	1	2	4	4	1	1	3	2	14	3	
	F	36	.....	1	1	1	.....	.....	2	1	22	5

AVERAGE TIME UNDER TREATMENT BY MONTHS FOR THESE CASES.

Incipient,	M	19.6	M	9.3	All classes,	18.3
	F	22.3	F	12.0		
Moderately advanced,	M	14.8	M	34.8	All males,	16.1
	F	18.3	F	52.3	All females,	20.2

CLASSIFICATION, SEX, AND DISPENSARY MONTHS (TIME UNDER TREATMENT) FOR CASES ADMITTED AND DISCHARGED DURING 1914.

Classification.	Sex.	Total Cases.	Months.												Un- stated.
			1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	
Incipient,	M	5,741	2,041	1,258	772	482	358	328	212	132	61	40	18	33	6
	F	738	161	95	85	64	69	36	27	11	11	13	1	13	
Moderately advanced,	M	1,584	574	377	224	135	81	81	47	32	11	14	4	4	
	F	970	346	139	142	78	69	46	41	25	14	4	4	4	
Far advanced,	M	1,129	499	270	147	73	53	36	21	17	3	2	3	3	
	F	565	260	92	78	29	23	16	19	6	3				
Unstated,	M	23	6	4	1	1	1	1	1	1				1	5
	F	22	7	1	3	1	1	1						1	1

AVERAGE TIME UNDER TREATMENT BY MONTHS FOR THESE CASES.

Incipient,	M	2.4	All classes,	2.8
	F	3.6		
Moderately advanced,	M	2.7	All males,	2.8
	F	3.0	All females,	3.0

CLASSIFICATION, SEX, AND REPORTED DURATION OF DISEASE OF DISPENSARY CASES ADMITTED AND DISCHARGED DURING 1914.

Classification.	Sex.	Total Cases.	Duration in Months.								Unstated.
			-3.	3-6.	6-9.	9-12.	12-18.	18-24.	24-36.	36-48.	
Incipient,	M F	5,741	798 141 121	981 130 110	630 76 66	266 27 21	836 84 83	191 72 16	603 6 149	328 19 43	510 116 149
Moderately advanced,	M F	1,584	224 115	272 148	189 90	71 55	236 159	40 19	135 120	78 66	99 59
Far advanced,	M F	1,129	132 62	194 71	148 58	61 28	176 88	38 4	126 73	81 41	45 26
Unstated,	M F	23 22	1 2	3 3	1 2	2 1	3 3	1 1	1 1	.....	9 7

AVERAGE DURATION OF DISEASE IN MONTHS.

All classes,	21.1	Incipient,	M 16.5 F 19.6	Far advanced,	M 22.0 F 20.8
All males,	20.4	Moderately advanced,	M 20.9 F 24.3	Unstated,	M 20.7 F 20.7
All females,	22.0				

GAIN OR LOSS IN WEIGHT IN DISPENSARY CASES ADMITTED AND DISCHARGED DURING 1914.

Classification.	Sex.	Total.	Gain.	Loss.	Stationary.	Unstated.
		5,741	1,815	1,374	2,551	1
Incipient,	M	738	396	141	291	
	F	759	323	151	285	
Moderately advanced,	M	1,584	529	409	635	1
	F	970	329	299	412	
Far advanced,	M	1,139	228	313	598	
	F	506	86	117	303	
Unstated,	M	23	2	9	12	
	F	22	2	5	15	

CLASSIFICATION, SEX, AND FAMILY HISTORY OF TUBERCULOSIS FOR THE DISPENSARY CASES ADMITTED AND DISCHARGED DURING 1914.

Classification.	Incipient.		Moderately Advanced.		Far Advanced.		Not Stated.		Total cases.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
No history,	377	175	978	119	724	278	7	6	3,084
Tuberculosis in mother or mother's family only,	94	104	122	127	77	51		3	578
Tuberculosis in father or father's family only,	80	80	101	88	65	31	3	1	449
Tuberculosis in brothers or sisters only,	72	81	120	101	111	40		2	527
Tuberculosis in children or consort's family only,	12	44	54	50	38	19	1	1	229
Tuberculosis in 2 or more of above classes,	83	157	151	159	97	62	2	2	707
Unstated,	20	18	58	32	27	15	10	7	187
Total cases,	738	759	1,584	970	1,139	506	23	22	5,741

CLASSIFICATION, SEX, AND NUMBER OF TUBERCULOUS RELATIVES
OF CASES GIVING TUBERCULOUS FAMILY HISTORY AMONG THE
DISPENSARY CASES ADMITTED AND DISCHARGED DURING 1914.

Classification.	Sex.	Total.	Number Tuberculous Relatives.								
			1.	2.	3.	4.	5.	6.	7.	8.	9.
		2,490	1,480	667	214	89	29	6	3	1	1
Incipient,	M	341	183	92	43	18	3	2	.....	.....	.....
	F	466	246	144	52	14	6	2	1	1	.....
Moderately advanced,...	M	548	361	122	35	21	7	1	1	.....	.....
	F	519	293	152	38	25	8	1	1	.....	1
Far advanced,	M	388	262	93	25	6	2	.....	.....	.....	.....
	F	213	137	59	20	4	3	.....	.....	.....	.....
Unstated,	M	6	3	2	1	.....	.....	.....	.....	.....	.....
	F	9	5	3	.....	1	.....	.....	.....	.....	.....

CLASSIFICATION, SEX, AND FAMILY HISTORY OF TUBERCULOSIS
FOR THE DISPENSARY CASES ADMITTED AND DISCHARGED DUR-
ING 1914.

TUBERCULOUS RELATIVES REPORTED.

Classification.	Incipient.		Moderately Advanced.		Far Advanced.		No History.		Total relatives.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
Father,	161	109	108	105	84	43	1	2	553
Brother,	85	90	133	105	94	50	1	1	559
Paternal aunt,	22	46	33	51	10	8	.....	1	171
Paternal uncle,	26	35	50	42	24	11	.....	1	189
Paternal grandfather,	10	20	8	12	2	8	.....	1	61
Paternal grandmother,	12	25	22	20	5	2	.....	.....	86
Consort,	15	50	59	49	40	24	1	1	239
Mother,	103	133	126	141	83	75	4	.....	665
Sister,	80	126	143	148	98	53	1	3	652
Maternal aunt,	47	65	53	73	27	16	1	.....	282
Maternal uncle,	18	28	45	38	36	15	1	.....	181
Maternal grandfather,	19	20	11	20	6	8	.....	.....	84
Maternal grandmother,	26	34	20	39	15	7	.....	1	142
Children,	6	21	26	40	18	15	.....	1	127
Total cases,	570	802	837	883	542	335	10	12	3,991

CLASSIFICATION, SEX, AND CONTACTS OF DISPENSARY CASES
ADMITTED AND DISCHARGED DURING 1914.

Classification.	Sex.	Total.	Known Contacts.					Un- stated.	No Contact,*
			Family.	Friends.	Work.	Other.			
		5,741	1,971	251	151	39	162	3,113	
Incipient,	{ M.,	728	283	36	21	6	10	288	
	{ F.,	759	370	43	7	3	9	329	
Moderately vanced.	{ M.,	1,584	419	51	61	11	31	1,065	
	{ F.,	970	410	15	28	5	18	664	
Far advanced,	{ M.,	1,139	360	47	50	11	13	518	
	{ F.,	506	181	30	13	3	6	273	
Unstated,	{ M.,	23	4	.....	.....	.....	9	10
	{ F.,	22	7	.....	.....	.....	7	6

*No direct contact with a tuberculous person is known to patient.

FINANCIAL STATISTICS CONCERNING THE 5,741 DISPENSARY CASES
ADMITTED AND DISCHARGED DURING 1914.

Family Income—Monthly:

Number of Families.	Income.
414	Not stated.
1,538	No income except charity.
12	Less than \$5.00 per month.
69	\$5.00 to \$10.00 per month.
137	\$10.00 to \$15.00 per month.
130	\$15.00 to \$20.00 per month.
283	\$20.00 to \$25.00 per month.
189	\$25.00 to \$30.00 per month.
284	\$30.00 to \$35.00 per month.
117	\$35.00 to \$40.00 per month.
700	\$40. to \$45.00 per month.
304	\$45.00 to \$50.00 per month.
388	\$50. to \$55.00 per month.
112	\$55.00 to \$60.00 per month.
399	\$60.00 to \$65.00 per month.
90	\$65.00 to \$70.00 per month.
110	\$70.00 to \$75.00 per month.
465	\$75.00 and over, per month.
Total number of families, 5215.	

Average number of persons to one family, 5.7.

Average monthly income of family, \$46.25.

Average monthly income per capita, \$5.91.

Statistics as to income based upon amount reported by patients checked by investigation of visiting nurses.

**SOCIAL STATISTICS CONCERNING THE 5,741 DISPENSARY CASES
ADMITTED AND DISCHARGED DURING 1914.**

Number of persons in the family.
 189 families had 1 member.
 352 families had 2 members.
 714 families had 3 members.
 858 families had 4 members.
 909 families had 5 members.
 796 families had 6 members.
 576 families had 7 members.
 422 families had 8 members.
 399 families had 9 members or over.
 526 families, members not stated.

Average number of persons to one family, 5.7.
 Total persons in 5,215 families, 29,481.

**SOCIAL STATISTICS CONCERNING THE 5,741 DISPENSARY CASES
ADMITTED AND DISCHARGED DURING 1914.**

Number of rooms to a family.
 586 families lived in 1 room.
 1,474 families lived in 2 rooms.
 1,855 families lived in 3 rooms.
 898 families lived in 4 rooms.
 371 families lived in 5 rooms.
 122 families lived in 6 rooms.
 39 families lived in 7 rooms.
 17 families lived in 8 rooms.
 34 families lived in 9 rooms.
 345 families lived in rooms, number not stated.

Average number of rooms, 3.0.

**SOCIAL STATISTICS CONCERNING THE 5,741 DISPENSARY CASES,
ADMITTED AND DISCHARGED DURING 1914.**

Table Showing Number of Persons Compared with Number of Rooms Occupied.

Rooms in Each Dwelling.	Number in Family.										Total Families.
	1	2	3	4	5	6	7	8	9 & over.	Not Stated.	
1,	178	145	102	69	47	26	4	4	5	6	586
2,	5	134	273	304	261	204	149	69	67	5	1,474
3,	3	54	225	319	377	301	219	169	3	185	1,855
4,	2	15	81	118	134	171	120	97	157	3	898
5 and over, .....	....	2	39	45	82	89	80	82	163	10	583
Unstated,	1	2	3	3	5	5	4	1	4	317	345
Total,	189	352	714	858	909	796	576	422	399	526	5,741

Total number of rooms occupied by families of 5,215 patients the
 number of whose rooms is given, 14,973 rooms
 Membership of families of 5,215 patients 5.7 members to the family, 26,628 persons
 Average number of persons to each room, 1.8 persons
 Average number of rooms to each family of 5.7 members, 2.0 rooms

CHARACTER OF DWELLINGS OCCUPIED BY DISPENSARY CASES ADMITTED AND DISCHARGED DURING 1914.

Classification.	Sex.	Total.	Private house.	Apartment.	Tenement.	Hospital and boarding house.	No home.	Unstated.
		5,741	5,683	347	162	38	46	65
Incipient,	{ M.,...	738	679	27	17	6	6	3
	{ F.,...	759	696	28	20	2	5	8
Moderately advanced,	{ M.,...	1,584	1,381	125	48	7	11	12
	{ F.,...	970	875	48	21	6	9	11
Far advanced,	{ M.,...	1,129	979	95	41	14	15	12
	{ F.,...	506	460	24	12	3	.....	7
Unstated,	{ M.,...	23	15	.....	.....	.....	.....	8
	{ F.,...	22	18	.....	.....	.....	.....	4

RENT PAID BY FAMILIES OF PATIENTS REPORTED.

Families	Monthly Rent.
1,441	Nothing.
715	No amount stated
3,585	\$38,753.85.

Average for the 3,585 families, \$10.81 a month.

NOTES ON THE EFFECT OF THE INJECTIONS, BY INDIVIDUAL
DOSES.

Special:—

The average weight of patients under consideration before beginning this treatment was 115.3 pounds.

The average weight of patients after all injections, covering a period of twelve months, was 132.7 pounds.

LOCAL EFFECT:

	Present.	Absent.	Not Stated.
Redness,	12	2,215	4,057
Swelling,	37	2,311	3,966
Tenderness,	158	2,131	4,025
Pain,	32	2,219	4,063

GENERAL EFFECT:

	Better.	Worse.	No Change.	No Data.	Absent.
Sleep,	823	224	5,267	...	...
Appetite,	1,046	337	4,931	...	...
Digestion,	826	141	5,347	...	...
Fever,	24	69	441	951	4,799
Night sweats,	114	7	28	282	5,883
Cough,	654	344	1,012	574	3,430
Expectoration,	492	355	998	692	3,777
Hemoptysis,	3	0	21	24	6,266
Glands enlarged,	31	41	675	940	4,627

(In 279 cases reported, 74 bad, at the commencement, glandular enlargements.)

REPORT ON FORMER PATIENTS OF THE DISPENSARIES
VISITED OR TRACED DURING 1914.

This report contains the results of the regulation of the Department which requires Dispensary nurses to visit all patients who have been discharged from the Dispensary, at intervals of six months, until two years have elapsed. The investigation was directed only to patients who did not have the benefit of Sanatorium treatment and may be used for comparison with the results of treatment in the Sanatoria which were also gathered by Dispensary nurses and are reported elsewhere. The difficulty in obtaining information varied considerably in different sections of the State depending upon whether the Dispensary was located in a city or rural community, whether its population was constantly changing or fairly well settled and, particularly, upon the degree of intelligence and the spirit of cooperation possessed by the patients, themselves. Wherever possible, a personal interview with each patient was obtained.

Patients may be discharged from a Dispensary because of "cure," "apparent cure," "arrest," or "apparent arrest" of the disease; for "non-attendance" at the Dispensary for a period of two months; for "removal" from the Dispensary district; for "non-compliance with instructions;" for "reference to the family physician" because of non-indigence; for "reference to Institutions outside of the Department's jurisdiction;" for "transference to Sanatoria" conducted by the State; and for "death." Cases transferred to departmental Sanatoria and

subsequently discharged are not included as they are reported in a separate investigation, as above mentioned. "Follow-up visits" were deemed unnecessary where the deaths of patients were known to the Dispensary in advance, as the total number of deaths of Dispensary patients are published in the main body of the Annual Report and the object of the "follow-up" work is to study the patient, himself, and not to copy from one record to another.

The form used and here reproduced indicates that the inquiry is directed to the changes in the physical, social, and moral conditions of the patient which have occurred between his admission to the Dispensary, his discharge therefrom, and the "follow-up visit," particularly the latter interval. These conditions vary considerably according to the reason for discharge and, for this reason, the report is divided into corresponding groups.

The most favorable conditions were naturally found among those who were discharged for "cure" or "arrest" of the disease. This was true, not only of the degree of physical improvement, but also of the marked betterment of economic conditions chiefly indicated by the increased earning capacity. These patients had been attendants at the Dispensaries for a sufficient length of time to have learned the importance of cooperation with the efforts of the physician and nurse and, hence, gave the most satisfactory answers to the inquiries made. It is interesting to note the departure from bad habits in the majority of these patients. Of the fifteen patients in this group, who were found to have died, six were reported to have died from causes other than tuberculosis, namely; one from nephritis, one from typhoid fever, one from valvular heart disease, two from diphtheria, and one in labor.

The patients discharged for "non-attendance" at the Dispensary compose a larger and less satisfactory group than those who were discharged for "cure" or "arrest" of the disease which proves what is generally inferred,—that indifference is the greatest enemy to any great movement for the welfare of the people, as well as to the success of the individual. The reasons given for "non-attendance" were, chiefly, loss of interest after improvement, indifference and refusal to believe a diagnosis, and the lure of patent medicine. Special efforts have been made to attack this problem and will continue. Dispensary physicians and nurses have been instructed to spend more time in the endeavor to bring these cases back to the Dispensary. There were thirty-one deaths in this group from causes other than tuberculosis, namely; seven cases of nephritis, two cases of uremia, three cases of carcinoma, two cases of gastritis, three cases of rheumatism, two cases of drowning, and one case each of diabetes, syphilis, endocarditis, aortic regurgitation, hepatic cirrhosis, abortion, in labor, surgical operation, injuries, bichloride poisoning, general paralysis, and convulsions.

The group of patients who were found to have "removed" from the Dispensary district is large and, in this stratum of society, always will be. The information obtained was imperfect as it could only be gathered from relatives, friends, or neighbors.

The number of patients, who were discharged because of "non-compliance with instructions," is comparatively small. The "non-compliance" consisted, chiefly, in refusal properly to dispose of sputum and persistence in the use of alcohol and tobacco. Thirty-nine of these patients refused to give any information.

The Dispensaries are sometimes entered by patients who are fully able to pay for treatment. These are referred to private physicians or to private Sanatoria. The tables afford an interesting comparison between the patients in this group and those who were eligible for State care. However, among the Institutions outside of the jurisdiction of the Department, Hospitals for advanced cases, County Homes, Insane Asylums, and Jails are also included.

To form any opinion as to the success of this upfollow, certain deductions must be made from the number discharged since the Dispensaries were established. The discharges of all kinds, as shown in the adjoined table, amount to 62,044. From this number must be taken the 6,779 persons who died while under treatment and the 14,376 who went to the Sanatoria, and possibly some 3,000 of those discharged in 1914 and not out long enough to be upfollowed. The removal of all these leaves 37,889 persons who might appear to be legitimate subjects for further investigation, if we include those that have been away from the Dispensaries much more than the two years contemplated in the general plan of an upfollow. Taking the record as it stands, the nurses got track of twenty-three per cent of all these cases.

PATIENTS DISCHARGED FROM THE TUBERCULOSIS DISPENSARIES OF THE PENNSYLVANIA STATE DEPARTMENT OF HEALTH SINCE THEIR ORGANIZATION, WITH THE UPFOLLOW INVESTIGATION FOR 1914.

Reason for Discharge.	1907.		1908.		1909.		1910.		1911.		1912.		1913.		1914.	
	Discharged.	Followed up.	Discharged.	Followed up.	Discharged.	Followed up.	Discharged.	Followed up.	Discharged.	Followed up.	Discharged.	Followed up.	Discharged.	Followed up.	Discharged.	Followed up.
Disease "arrested" or "cured",	4,846	1,181	106	.....	602	.....	897	8	715	31	793	423	917	907	817	112
Non-attendance,	18,172	2,741	75	.....	1,652	3	4,706	9	3,121	105	2,913	826	3,074	1,624	2,631	177
Removed (reported indirectly),	14,606	3,225	2,017	56	2,873	343	3,913	720	1,436	934	1,520	557	1,411	397	1,389	218
Removed (and actually traced), .....	.....	419	.....	.....	.....	.....	.....	1	.....	36	.....	245	.....	123	.....	14
Non-compliance,	1,082	226	.....	.....	.....	.....	208	5	137	37	169	83	219	93	304	8
Referred to family physicians,	2,183	621	26	.....	449	1	489	2	374	45	294	300	310	263	241	10
Found in outside institution,* .....	.....	*272	.....	.....	.....	.....	.....	1	.....	38	.....	102	.....	87	.....	46
Transferred to State sanatoria,	14,376	.....	20	.....	1,647	.....	2,002	.....	2,130	.....	2,286	.....	2,998	.....	3,298	.....
Dead,	6,779	.....	486	.....	1,096	.....	1,249	.....	1,010	.....	925	.....	989	.....	1,036	.....
Grand and annual totals,	62,044	8,988	2,730	56	8,289	347	13,469	746	8,973	1,224	8,899	2,536	9,913	3,194	9,716	585

*Discharged for the various reasons herein stated but found upon "upfollow" to be inmates of outside institutions.

TABLE A-1.

Admission, Discharge, and Upfollow Classification of 1,181 Dispensary Patients with the Intervals Since Their Discharge as "Apparently Cured" or "Arrested" Cases. Traced in 1914.

	Admitted As	Discharged As	Upfollowed As	Interval Since Discharge.									
				Less than 6 months.	6 to 12 months.	12 to 18 months.	18 to 24 months.	24 to 30 months.	30 to 36 months.	36 to 42 months.	42 months and more.		
Apparently cured. 53=7.9%.	No data,			0	0	0	1	0	0	0	0	0	0
	Improved,			8	4	4	9	4	0	0	0	0	0
	Stationary,			1	4	5	1	0	0	0	0	0	0
	Dead,			0	0	0	0	0	0	0	0	0	0
Incipient. 95=76.6%.	No data,			3	18	21	30	21	1	0	0	0	0
	Improved,			46	174	158	171	89	18	3	0	0	0
	Stationary,			15	16	22	30	16	3	0	0	0	0
	Dead,			28	9	3	11	0	0	0	0	0	0
Apparently cured. 34=12.4%.	No data,			0	0	0	0	0	0	0	0	0	0
	Improved,			3	7	5	4	1	1	0	0	0	0
	Stationary,			0	0	3	0	2	1	0	0	0	0
	Dead,			0	0	0	1	0	0	0	0	0	0
Moderately advanced. 275=23.3%.	No data,			1	4	4	7	5	0	0	0	0	0
	Improved,			19	48	43	34	19	3	0	0	0	0
	Stationary,			3	7	13	8	6	0	0	0	0	0
	Dead,			0	0	0	0	0	0	0	0	0	0

TABLE A-1—Continued.

Admitted As	Discharged As	Upfollowed As	Interval Since Discharge.									
Far advanced. 1=0.1%.	Arrested. 1=100.0%.	Improved,	1	0	0	1	0	0	0	0	0	0

Average age of 57 incipient, apparently cured cases=21.4 years.
 Average age of 82 incipient, arrested cases=33.3 years.
 Average age of 34 moderately advanced, apparently cured cases=33.9 years.
 Average age of 241 moderately advanced, arrested cases=26.6 years.
 Age of one far advanced, arrested case=21 years.

Average Dispensary Attendance.
 Incipient, apparently cured=27.3 months.
 Incipient, arrested=24.6 months.
 Moderately advanced, apparently cured=26.3 months.
 Moderately advanced, arrested=22.0 months.
 Far advanced, arrested=26.6 months.

TABLE A-2. REPORTS CONCERNING THE BODY-WEIGHT, SPUTUM, AND HABITS OF THE 1,166 CASES OF THIS SERIES FOUND TO BE ALIVE AT THE LAST VISIT IN 1914.

Body-weight:—

	Total.	Gained.	Lost.	Unchanged.	Unstated.
a. Apparently cured (87).					
Inclipient,	53	41	5	1	6
Moderately advanced,	24	24	3	6	1
Far advanced,	0	0	0	0	0
b. Arrested (1,079).					
Inclipient,	837	612	63	64	98
Moderately advanced,	241	161	25	19	29
Far advanced,	1	1	0	0	0

Sputum:—

	Total.	Positive.	Negative.	No Data.
a. Apparently cured (87).				
Inclipient,	53	0	12	41
Moderately advanced,	34	4	9	21
Far advanced,	0	0	0	0
b. Arrested (1,079).				
Inclipient,	837	16	18	803
Moderately advanced,	241	11	74	156
Far advanced,	1	0	1	0

Habits:—

	Total.	Yes.	No.	No Data.	
a. Apparently cured (87).					
Inclipient,	53	Alcohol,	0	52	1
		Tobacco,	5	47	1
		Narcotics,	0	47	6
Moderately advanced,	34	Alcohol,	1	33	0
		Tobacco,	2	32	0
		Narcotics,	0	34	0
b. Arrested (1,079).					
Inclipient,	837	Alcohol,	21	746	70
		Tobacco,	85	632	70
		Narcotics,	6	760	71
Moderately advanced,	241	Alcohol,	10	210	21
		Tobacco,	35	185	21
		Narcotics,	0	220	21
Far advanced,	1	Alcohol,	0	1	0
		Tobacco,	0	1	0
		Narcotics,	0	1	0

TABLE A-3. REPORTS CONCERNING OCCUPATION AND INCOME OF PATIENTS OF OCCUPATIONAL AGE BELONGING TO THIS SERIES.

DISCHARGED AS "APPARENTLY CURED."

I. Incipient.

Males.		Upfollowed as	
Unoccupied,	Admitted as	Occupied,	5 (5 Agr.)*
Occupied,	5	Unoccupied,	1
	8 (1 Agr.)	Occupied,	7 (1 Agr.)
Net gain in number of persons occupied,		4	
Net gain in number of persons occupied in agriculture, etc.,		5	
Average weekly income of 4 cases before admission,		\$8.00	
Average weekly income of 7 cases at time of visit,		\$8.56	

*Numbers in parenthesis refer to such of the cases as belong to the group of agricultural occupations or are housewives as the case may be.

Females.		Upfollowed as	
Unoccupied,	Admitted as	Unoccupied,	2
Occupied,	5	Occupied,	3 (1 H.W.)
Occupied,	11 (6 H.W.)	Occupied,	11 (6 H.W.)
Net gain in number of persons occupied,		3	
Average weekly income of 4 cases before admission,		\$3.00	
Average weekly income of 7 cases at time of visit,		\$3.00	

II. Moderately Advanced.

Males.		Upfollowed as	
Occupied,	Admitted as	Occupied,	4 (1 Agr.)
	4 (1 Agr.)		
Average weekly income of 4 cases before admission,		\$9.75	
Average weekly income of 4 cases at time of visit,		\$10.50	

Females.		Upfollowed as	
Unoccupied,	Admitted as	Unoccupied,	2
Occupied,	3	Occupied,	1
Occupied,	21 (18 H.W.)	Unoccupied,	1
		Occupied,	20 (18 H.W.)

No gain or loss in persons occupied:

Average weekly income of 1 case before admission,	\$4.00
Average weekly income of 2 cases at time of visit,	\$5.00

DISCHARGED AS "ARRESTED" GROUP.

I. Incipient

Males.		Upfollowed as	
Unoccupied,	Admitted as	No data,	3
Occupied,	43	Unoccupied,	12
		Occupied,	28 (8 Agr.)
Occupied,	140 (27 Agr.)	No data,	18
		Unoccupied,	3
		Occupied,	119 (23 Agr.)
Net gain in number of persons occupied,		7	
Net gain in number of persons occupied in agriculture and allied pursuits,		4	
Average weekly income of 136 cases (before admission),		\$9.33	
Average weekly income of 136 cases at time of visit,		\$10.12	

Females.		Upfollowed as	
Admitted as			
Unoccupied,	78	No data,	4
		Unoccupied,	34
		Occupied,	40 (5 H.W.)
Occupied,	242 (146H.W.)	No data,	11
		Unoccupied,	9
		Occupied,	219 (116H.W.)
Net gain in number of persons occupied,		17	
Average weekly income of 28 cases (housewives excluded) before admission,		\$5.33	
Average weekly income of 105 cases (housewives excluded) at time of visit,		\$5.34	

II. Moderately Advanced.

Males.		Upfollowed as	
Admitted as			
Unoccupied,	10	Unoccupied,	2
		Occupied,	8
Occupied,	42 (8 Agr.)	No data,	3
		Unoccupied,	2
		Occupied,	37 (7 Agr.)
Net gain in number of persons occupied,		3	
Average weekly income of 39 cases before admission,		\$10.23	
Average weekly income of 41 cases at time of visit,		\$10.53	

Females.		Upfollowed as	
Admitted as			
Unoccupied,	19	No data,	3
		Unoccupied,	9
		Occupied,	7
Occupied,	107 (66 H.W.)	No data,	8
		Unoccupied,	5
		Occupied,	94 (66 H.W.)
Net loss in number of persons occupied,		6	
Average weekly incoe of 28 cases (housewives excluded) before admission,		\$4.61	
Average weekly income of 23 cases (housewives excluded) at time of visit,		\$5.27	

III. Far advanced.

One female not occupied before admission, when visited, working as a domestic at,	\$3.00
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TABLE C. REPORTS CONCERNING 272 DISPENSARY PATIENTS REFERRED TO "INSTITUTIONS" NOT UNDER CONTROL OF THE STATE DEPARTMENT OF HEALTH. TRACED IN 1914.

Admitted As	Discharged As	Upfollowed As			
Pott's Disease (1).	Stationary (1).	No data,	1		
Incipient (49).	No data (3).	No data,	1		
		Improved,	2		
		Stationary,	0		
		Progressive,	0		
		Dead,	0		
Arrested (3).	No data,	No data,	0		
		Improved,	2		
		Stationary,	1		
		Progressive,	0		
		Dead,	0		
Improved (25).	No data,	No data,	11		
		Improved,	11		
		Stationary,	1		
		Progressive,	1		
		Dead,	1		
Progressive (18).	No data,	No data,	3		
		Improved,	2		
		Stationary,	2		
		Progressive,	1		
		Dead,	10		
Moderately advanced (100).	No data (1).	Stationary,	1		
		Arrested (2).	No data,	No data,	0
				Improved,	0
				Stationary,	0
				Progressive,	2
Dead,	0				
Improved (33).	No data,	No data,	12		
		Improved,	6		
		Stationary,	3		
		Progressive,	2		
		Dead,	10		
Progressive (64).	No data,	No data,	23		
		Improved,	6		
		Stationary,	3		
		Progressive,	4		
		Dead,	28		
No data (5).	No data,	No data,	2		
		Improved,	0		
		Stationary,	0		
		Progressive,	0		
		Dead,	3		
Arrested (2).	No data,	No data,	1		
		Improved,	0		
		Stationary,	1		
		Progressive,	0		
		Dead,	0		
Far advanced (122).	Improved (13).	No data,	3		
		Improved,	2		
		Stationary,	1		
		Progressive,	3		
		Dead,	4		
Progressive (102).	No data,	No data,	17		
		Improved,	3		
		Stationary,	0		
		Progressive,	3		
		Dead,	79		

TABLE D. UPFOLLOW REPORT CONCERNING 49 DISPENSARY PATIENTS DISCHARGED BECAUSE OF "REMOVED." CASES TRACED IN 1914.

Admitted As	Discharged As	Discharged As	Interval Since Discharge.							42 months and more.		
			Less than 6 months.	6 to 12 months.	12 to 18 months.	18 to 24 months.	24 to 30 months.	30 to 36 months.	36 to 42 months.			
Gland (1=0.2%).	Improved (1=100%).	Improved,	1	0	0	0	1	0	0	0	0	0
	Apparently cured. 0=0.0%.	No data,	0	0	0	0	0	0	0	0	0	0
		Improved,	0	0	0	0	0	0	0	0	0	0
		Stationary,	0	0	0	0	0	0	0	0	0	0
		Progressive,	0	0	0	0	0	0	0	0	0	0
		Dead,	0	0	0	0	0	0	0	0	0	0
	Arrested. 7=4.2%.	No data,	0	0	0	0	0	0	0	0	0	0
		Improved,	4	0	0	1	1	2	0	0	0	0
		Stationary,	2	0	0	0	1	0	1	0	0	0
		Progressive,	0	0	0	0	0	0	0	0	0	0
		Dead,	1	0	0	0	0	1	0	0	0	0
Incontinent. 167=83.8%.	Improved. 128=76.6%.	No data,	1	0	0	0	0	0	0	0	1	0
		Improved,	86	2	9	11	28	30	3	3	1	0
		Stationary,	23	3	3	1	1	1	1	0	0	0
		Progressive,	4	0	1	1	1	1	1	0	0	0
		Dead,	13	3	0	1	5	4	0	0	0	0
	Progressive. 32=19.2%.	No data,	12	0	1	2	6	2	1	0	0	0
		Improved,	9	0	1	0	3	5	0	0	0	0
		Stationary,	6	0	3	0	1	0	2	0	0	0
		Progressive,	4	0	0	1	2	1	0	0	0	0
		Dead,	1	0	1	0	0	0	0	0	0	0

TABLE D.—Continued.

Admitted As	Discharged As	Upfollowed As	Interval Since Discharge.										
			Less than 6 months.	6 to 12 months.	12 to 18 months.	18 to 24 months.	24 to 30 months.	30 to 36 months.	36 to 42 months.	42 months and more.			
Apparently cured. 0=0.0%.	No data, Improved, Stationary, Progressive, Dead,	No data, Improved, Stationary, Progressive, Dead,	0	0	0	0	0	0	0	0	0	0	
			0	0	0	0	0	0	0	0	0	0	
			0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0
Moderately advanced. 14=41.5%.	Arrested. 2=1.1%.	No data, Improved, Stationary, Progressive, Dead,	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0
Improved. 10=59.8%.	No data, Improved, Stationary, Progressive, Dead,	No data, Improved, Stationary, Progressive, Dead,	1	0	0	0	0	0	0	0	0	0	0
			56	3	10	11	16	15	0	0	0	0	0
			19	0	5	4	4	1	1	0	0	0	0
			7	0	3	1	3	3	2	0	0	0	0
Progressive. 68=39.1%.	No data, Improved, Stationary, Progressive, Dead,	No data, Improved, Stationary, Progressive, Dead,	21	0	1	0	9	7	4	4	0	0	0
			0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0

Grand total of cases removed,	3644	
Cases removed who were located in new homes,	419	
Cases removed with no further information.		
No data,	44	
Incipient,	954	
Moderately advanced,	786	
Far advanced,	184	
Glands,	3	1971
Cases moved to another part of Pennsylvania with no new Dispensary enrollment.		
No data,	16	
Incipient,	347	
Moderately advanced,	262	
Far advanced,	116	741
Cases moved out of Pennsylvania.		
Incipient,	170	
Moderately advanced,	133	
Far advanced,	29	332
Cases removed to other countries.		
No data,	6	
Incipient,	46	
Moderately advanced,	87	
Far advanced,	42	181

COUNTRIES TO WHICH THEY REMOVED.

Ireland,	9	Greece,	3
England,	4	Syria,	2
Wales,	4	Russia,	11
Scotland,	3	Italy,	47
Canada,	5	Hungary,	32
Denmark,	1	Germany,	1
Poland,	1	Not stated,	57
Sweden,	1		

TABLE E-2.

Reports concerning the Body-Weight, Sputum, and Habits of the 2,501 cases of this Series Found to be Alive at the Last Visit in 1914.

<i>Body-weight</i>		Total	Gain	Loss	Stationary	Unstated
Incipient,	1,400	936	187	173	104	
Moderately advanced,	1,001	523	223	196	59	
Far advanced,	100	33	39	15	13	

<i>Sputum</i>			Positive	Negative	No data
Incipient,	1,400		25	352	1,023
Moderately advanced,	1,001		44	249	708
Far advanced,	100		6	22	72

<i>Habits</i>			Yes	No	No data
Incipient,	1,400	Alcohol,	110	1,269	21
		Tobacco,	238	1,141	21
		Narcotics,	2	1,377	21
Moderately advanced,	1,001	Alcohol,	155	823	23
		Tobacco,	251	727	23
		Narcotics,	3	975	23
Far advanced,	100	Alcohol,	14	83	3
		Tobacco,	21	76	3
		Narcotics,	2	96	2

TABLE E-3.

Reports Concerning Occupation and Income of Patients of Occupational Age in This Series.

I. INCIPIENT.

Males

Admitted as:—		Upfollowed as:—	
Unoccupied,	54	Unoccupied,	18
		Occupied,	36 (9 Agr.)
Occupied,	313 (66 Agr.)	No data,	9
		Unoccupied,	32
		Occupied,	272 (69 Agr.)

Net loss in number of persons occupied,	5
Net gain in number of persons occupied in agriculture, etc.,	12
Average weekly income of 291 cases before admission,	\$10.53
Average weekly income of 273 cases at time of visit,	\$10.23

Females

Admitted as:—		Upfollowed as:—	
Unoccupied,	121	Unoccupied,	74
		Occupied,	47 (11 H. W.)
Occupied,	464 (286 H. W.)	No data,	5
		Unoccupied,	30
		Occupied,	429 (294 H. W.)

Net gain in number of persons occupied,	12
Average weekly income of 135 cases before admission (housewives excluded),	\$5.16
Average weekly income of 155 cases at time of visit (housewives excluded),	\$5.74

*Numbers in parenthesis refer to such cases as belong to the group of agricultural occupations or are housewives, as the case may be.

II. MODERATELY ADVANCED.

Males

Admitted as:—		Upfollowed as:—	
Unoccupied,	37	No data,	2
		Unoccupied,	12
		Occupied,	23 (6 Agr.)
Occupied,	339 (59 Agr.)	No data,	11
		Unoccupied,	50
		Occupied,	278 (51 Agr.)
Net loss in number of persons occupied,			38
Net loss in number of persons occupied in agriculture, etc.,			2
Average weekly income of 313 cases before admission,			\$10.91
Average weekly income of 279 cases at time of visit,			\$10.39

Females

Admitted as:—		Upfollowed as:—	
Unoccupied,	47	No data,	1
		Unoccupied,	23
		Occupied,	23 (7 H. W.)
Occupied,	418 (292 H. W.)	No data,	10
		Unoccupied,	23
		Occupied,	355 (303 H. W.)
Net loss in number of persons occupied,			10
Average weekly income of 119 cases before admission,			\$5.88
Average weekly income of 89 cases at time of visit,			\$5.51

III. FAR ADVANCED.

Males

Admitted as:—		Upfollowed as:—	
Unoccupied,	2	Unoccupied,	1
		Occupied,	1
Occupied,	29 (8 Agr.)	No data,	2
		Unoccupied,	10
		Occupied,	17 (3 Agr.)
Net loss in number of persons occupied,			11
Net loss in number of persons occupied in agriculture,			5
Average weekly income of 23 cases before admission,			\$10.39
Average weekly income of 15 cases at time of visit,			\$8.60

Females

Admitted as:—		Upfollowed as:—	
Unoccupied,	3	Unoccupied,	3
Occupied,	57 (37 H. W.)	No data,	1
		Unoccupied,	8
		Occupied,	48 (37 H. W.)
Net loss in number of persons occupied,			9
Average weekly income of 17 cases before admission,			65.94
Average weekly income of 10 cases at time of visit,			\$6.70

TABLE F.
Upfollow Report on 226 Dispensary Patients Discharged for "Non-Compliance with Instructions." Cases Traced in 1914.

Admitted as	Discharged as	Upfollowed as	Interval Since Discharge.										
			Less than 6 months.	6 to 12 months.	12 to 18 months.	18 to 24 months.	24 to 30 months.	30 to 36 months.	36 to 42 months.	42 months and more.			
Apparently cured. 0=0.0%		No data,	0	0	0	0	0	0	0	0	0	0	0
		Improved,	0	0	0	0	0	0	0	0	0	0	0
		Stationary,	0	0	0	0	0	0	0	0	0	0	0
		Progressive,	0	0	0	0	0	0	0	0	0	0	0
Arrested. 1=1.0%		Dead,	0	0	0	0	0	0	0	0	0	0	0
		No data,	0	0	0	0	0	0	0	0	0	0	0
		Improved,	1	0	0	0	0	0	0	0	0	0	0
		Stationary,	0	0	0	0	0	0	0	0	0	0	0
Improved. 52=52.5%		Progressive,	0	0	0	0	0	0	0	0	0	0	0
		Dead,	0	0	0	0	0	0	0	0	0	0	0
		No data,	11	0	2	4	2	2	3	0	0	0	0
		Improved,	28	0	6	8	7	3	0	0	0	0	0
Incipient. 39=43.8%		Stationary,	9	0	1	4	1	0	0	0	0	0	0
		Progressive,	3	0	0	2	0	0	0	0	0	0	0
		Dead,	1	0	0	0	0	1	0	0	0	0	0
		No data,	1	0	0	0	0	0	0	0	0	0	0
Progressive. 40=46.5%		No data,	16	2	7	2	3	2	0	0	0	0	0
		Improved,	9	0	4	3	0	1	0	0	0	0	0
		Stationary,	11	1	3	1	3	2	1	0	0	0	0
		Progressive,	5	0	2	3	0	0	0	0	0	0	0
		Dead,	5	0	3	0	1	0	1	0	0	0	0

NOTES CONCERNING THE DISCHARGED DISPENSARY CASES WHICH
HAVE BEEN TRACED IN 1914.

a. Average age of all series except Series A, for which a separate table is given, =26.1 years.

For the Incipient cases, =23.3 years

For the Moderately Advanced cases, =30.9 years

For the Far Advanced cases, =37.8 years

For the Glandular cases, =10.5 years

b. Observance of Dispensary Regulations:—

Total cases, =5,463 Poor, = 834

Good, =1,485 Unstated, =1,405

Fair, =1,739

SUBDIVISION OF TUBERCULOSIS SANATORIA.

PENNSYLVANIA STATE SANATORIUM FOR TUBERCULOSIS.
NO. 1, MONT ALTO.

FRED. C. JOHNSON, M. D., *Medical Director.*

During the year the capacity of the Sanatorium was increased sixty-four beds through the installation of tents at the Lower Camp and at the Hospital. The daily average capacity, including beds occupied by patients receiving honorariums, was one thousand and ninety-nine and nine-tenths (1099.9), while the daily average number of patients treated was one thousand and fifty-nine and two-tenths (1059.2).

Despite the opening of the Cresson and Hamburg State Sanatoria, with their added capacity for advanced cases, the need of additional beds for such cases at this Sanatorium still exists and is obvious from the fact that of three thousand and eighty-seven cases treated during the year one thousand three hundred and sixty-six, a little over forty-four per cent., were classified as Far Advanced on admission.

On January 1, 1914 there were nine hundred and twenty-five patients under treatment, of whom six hundred and twenty-five were males and three hundred were females. The admission classification of these cases was as follows: Incipient, one hundred and fifty-five, or sixteen and seven-tenths per cent; Moderately Advanced, three hundred and eighty-four or forty-one and five-tenths per cent; and Far Advanced, three hundred and eighty-six or forty-one and seven-tenths per cent.

During the year two thousand one hundred and sixty-two patients were admitted, of whom one thousand three hundred and ninety-four were males and seven hundred and sixty-eight were females. The admission classification of these cases was as follows: Incipient, two hundred and fifty-six or eleven and eight-tenths per cent.; Moderately Advanced, nine hundred and twenty-six or forty-two and eight-tenths per cent.; and Far Advanced, nine hundred and eighty or forty-five and three-tenths per cent.

During the year one thousand nine hundred and nineteen living patients were discharged, of whom twelve hundred were males and seven hundred and nineteen were females. The admission classification of these cases was as follows: Incipient, two hundred and

eighty-two, or fourteen and seven-tenths per cent.; Moderately Advanced, nine hundred and nine, or forty-seven and four-tenths per cent.; and Far Advanced, seven hundred and twenty-eight, or thirty-seven and nine-tenths per cent.

During the year two hundred and twenty-nine patients were discharged by death. Of these one hundred and eighty-one were males and forty-eight were females. The classification of these cases at the time of admission was as follows: Moderately Advanced, fourteen, or six and one-tenth per cent., and Far Advanced, two hundred and fifteen, or ninety-three and nine-tenths per cent.

Of the four unclassified cases referred to in Table I, three deserted before they could be examined and classified. The remaining case in the group was a child born prematurely and living but two hours.

On December 31, 1914, there were remaining under treatment nine hundred and thirty-nine patients, of whom six hundred and thirty-eight were males and three hundred and one were females. The admission classification of these cases was as follows: Incipient, one hundred and twenty-nine, or thirteen and seven-tenths per cent.; Moderately Advanced, three hundred and eighty-seven, or forty-one and two-tenths per cent.; and Far Advanced, four hundred and twenty-three, or forty-five and one-tenth per cent.

In all, three thousand and eighty-seven (3,087) patients were treated during the year 1914, of whom two thousand and nineteen (2,019) were males and one thousand and sixty-eight (1,068) were females. The admission classification of these cases was as follows: Incipient, four hundred and eleven, or thirteen and three-tenths per cent.; Moderately Advanced, one thousand three hundred and ten, or forty-two and four-tenths per cent.; and Far Advanced, one thousand three hundred and sixty-six, or forty-four and two-tenths per cent.

Of the two hundred and eighty-two Incipient cases discharged, sixty-five or twenty-three per cent., were discharged as Improved; one hundred and four, or thirty-six and nine-tenths per cent., as Arrested; and one hundred, or thirty-five and five-tenths per cent., as Apparently Cured; while the disease in thirteen, or four and six-tenths per cent., remained Progressive. Of these cases, two hundred and fifty-six, or ninety and eight-tenths per cent., gained weight; eighteen or six and four-tenths per cent., lost weight; while the weight of eight, or two and eight tenths per cent., remained stationary. For the two hundred and fifty-six that gained weight, the average gain was nine and five-tenths pounds.

Of the nine hundred and twenty-three Moderately Advanced cases discharged, three hundred and forty-nine, or thirty-seven and eight-tenths per cent., were discharged as Improved; three hundred

and thirty-four, or thirty-six and two-tenths per cent., as Arrested; sixty-three, or six and eight-tenths per cent., as Apparently Cured; one hundred and sixty-three, or seventeen and six-tenths per cent., as Progressive; while fourteen, or one and five-tenths per cent., died. Of the nine hundred and nine living Moderately Advanced cases discharged, seven hundred and thirty-five, or eighty and eight-tenths per cent., gained weight; one hundred and thirty-three, or fourteen and six-tenths per cent., lost weight; while the weight of forty-one, or four and five-tenths per cent., remained stationary. For the seven hundred and thirty-five cases that gained weight, the average gain was twelve and six-tenths pounds.

Of the nine hundred and forty-three Far Advanced cases discharged, two hundred and sixty-three, or twenty-seven and nine-tenths per cent., were discharged as Improved; ninety-seven, or ten and three tenths per cent., as Arrested; three, or three-tenths per cent., as Apparently Cured; three hundred and sixty-five, or thirty-eight and seven-tenths per cent., as Progressive; while two hundred and fifteen, or twenty-two and eight-tenths per cent., died. Of the seven hundred and twenty-eight living Far Advanced cases discharged, four hundred and fourteen, or fifty-six and nine-tenths per cent., gained weight; two hundred and forty-five, or thirty-three and six-tenths per cent., lost weight; while the weight of sixty-nine, or nine and five-tenths per cent., remained stationary. For the four hundred and fourteen cases that gained weight, the average gain was nine and one-tenth pounds.

Further reference to Table II shows the results obtained in the treatment of patients in the various stages of the disease according to the length of stay.

The average Hospital days of the two thousand one hundred and forty-eight cases discharged was as follows: Incipient 183.9 days, Moderately Advanced 154.7 days, Far Advanced 130.3 days, or for all classes 147.8 days.

The results of treatment according to the age of the patient and the stage of the disease are shown in Table III. The average age of the Incipient cases discharged was sixteen, of the Moderately Advanced twenty-nine and three-tenths, and of the Far Advanced thirty-two and two-tenths years. Of those that died, the average age was thirty-four and two-tenths years and of all classes twenty-nine and one-tenth years.

The color and social condition of the patients discharged during the year are shown in Table IV.

The results obtained in the treatment of seventy-five negro patients discharged during the year appear in Table V.

The nativity and parental nativity of the patients discharged during the year are seen in Table VI. One thousand five hundred and seventy or seventy-three and one-tenth per cent. were native born,

while the father is recorded as native born in nine hundred and seventy-one or forty-five and two-tenths per cent. and the mother in one thousand and seventeen or forty-seven and two-tenths per cent.

The County residence of patients treated is shown in Table VII. Of the three thousand and eighty-seven cases treated during the year two thousand and eighteen or sixty-five and four-tenths per cent. were residents of the six most populous cities in the Commonwealth.

Among the two hundred and twenty-nine cases that died, the following complications acting as direct or contributing causes of death were noted:

Abscess, Ischio-rectal,	2
Appendicitis, Acute Suppurative,	1
Cardiac Dilation, Acute,	4
Diabetes Mellitus,	2
Endocarditis, Chronic,	2
Endocarditis, Chronic, with Hydropneumothorax,	1
Endocarditis, Chronic, with Pulmonary Haemorrhage (Terminal),	1
Enteritis, Tuberculous,	17
Enteritis, Tuberculous, with Chronic Interstitial Nephritis,	1
Enteritis, Tuberculous, with Chronic Parenchymatous Nephritis, ..	1
Enteritis, Tuberculous, with Ischio-rectal Abscess,	1
Epilepsy,	1
Haemorrhage, Pulmonary, (Terminal),	11
Hepatic Cirrhosis, Atrophic,	1
Hydropneumothorax,	2
Laryngitis with Enteritis, Tuberculous,	18
Laryngitis with Enteritis, Tuberculous, and Pulmonary Oedema, ..	1
Laryngitis with Meningitis, Tuberculous,	2
Laryngitis with Peritonsillitis, Tuberculous,	1
Laryngitis, Tuberculous,	80
Laryngitis, Tuberculous, with Acute Suppurative Appendicitis, ..	1
Laryngitis, Tuberculous, with Atrophic Hepatic Cirrhosis,	1
Laryngitis, Tuberculous, with Chronic Endocarditis,	1
Laryngitis, Tuberculous, with Chronic Parenchymatous Nephritis, ..	2
Laryngitis, Tuberculous, with Chronic Interstitial Nephritis,	2
Laryngitis, Tuberculous, with Diabetes Mellitus,	1
Laryngitis, Tuberculous, with Empyema,	1
Laryngitis, Tuberculous, with Pulmonary Haemorrhage (Terminal) ..	4
Laryngitis, Tuberculous, with Pulmonary Oedema,	1
Laryngitis, Tuberculous, with Pyopneumothorax,	2
Laryngitis, Tuberculous, with Rectal Fistula,	1
Meningitis, Tuberculous	3
Nephritis, Chronic Interstitial,	1
Nephritis, Chronic Interstitial, with Uraemia,	1
Nephritis, Chronic Parenchymatous,	2
Peritonitis, Tuberculous,	1
Pneumonia, Lobar,	1
Pyopneumothorax,	2
Syphilis,	2
Tuberculosis, Miliary,	1

Of those that died, three were moribund on admission, and one hundred and thirty-four or fifty-eight and five-tenths per cent., died within three months after admission.

Of all cases discharged, a family history of pulmonary tuberculosis was obtained for nine hundred and eighty-eight or forty-six per cent., while a history of contact was recorded in one thousand three hundred and seventy-five or sixty-four per cent.

The previous medical history of the two thousand one hundred and forty-eight cases discharged was as follows:

No record,	2	Pertussis,	948
No disease,	99	Rheumatism,	552
Diphtheria,	230	Pleurisy,	741
Pneumonia,	451	Syphilis,	14
Influenza,	551	Enteric Fever,	373
Measles,	1,483	Frequent colds,	1,408

The record of the number of persons in the families of patients discharged and the monthly income of such families is as follows.

Number in Family.		Family Income per Month.	
No record,	7	No record,	45
1 in family,	242	No income,	525
2 in family,	244	Less than \$10,	37
3 in family,	313	\$10-19,	112
4 in family,	324	20-29,	179
5 in family,	314	30-39,	205
6 in family,	232	40-49,	335
7 in family,	181	50-59,	178
8 in family,	105	60-69,	226
9 in family,	68	70-79,	110
10 in family,	72	80-89,	71
11 in family,	19	90-99,	40
12 in family,	9	100 and over,	56
13 in family,	14	Average,	\$17.95
14 in family,	4		
Average,	4.2		

The occupations of patients discharged during the year are shown below in the form employed by the United States Census Bureau:

MALE.

PROFESSIONAL GROUP,	24
Engineers, Surveyors,	12
Musicians, Teachers of Music,	2
Physicians and Surgeons,	1
Teachers (School),	2
Others of this class not specified,	7
CLERICAL AND OFFICIAL GROUP,	102
Bookkeepers, Clerks, Copyists,	86
Collectors, Agents, Auctioneers,	10
Others of this class not specified,	6
MERCANTILE AND TRADING GROUP,	46
Commercial Travelers,	31
Merchants, Dealers,	5
Hucksters and Peddlers,	10
PUBLIC ENTERTAINMENT GROUP,	12
Hotel and Boarding House Keepers,	2
Saloon Keepers, Liquor Dealers, Bartenders,	10

PERSONAL SERVICE GROUP,	31
Barbers and Hairdressers,	14
Janitors, Sextons,	4
Policemen, Watchmen, Detectives,	11
Soldiers, Sailors, Marines,	2
LABORING AND SERVANT GROUP,	197
Laborers (Not Agricultural),	170
Servants,	27
MANUFACTURING AND MECHANICAL INDUSTRY GROUP,.....	475
Bakers and Confectioners,	14
Blacksmiths,	13
Boot and Shoe Makers,	19
Brewers, Distillers, Rectifiers,	1
Butchers,	11
Cabinet Makers and Upholsterers,	9
Carpenters and Joiners,	21
Cigar Makers, Tobacco Workers,	6
Clock and Watch Repairers, Jewelers,	2
Compositors, Printers, Pressmen,	20
Coopers,	1
Engineers, Firemen (Not Railway),	21
Glass Blowers, Glass Workers	8
Hat and Cap Makers,	9
Iron and Steelworkers,	61
Leather Workers,	5
Machinists,	54
Masons,	13
Mill and Factory Operators (Textile),	48
Millers (Flour and Grist,)	3
Painters, Glaziers,	17
Plasterers,	3
Plumbers, Gas and Steam Fitters,	12
Tailors,	47
Tinners, Tinware Makers,	12
Others of this Class not specified,	45
AGRICULTURAL AND TRANSPORTATION GROUP,.....	194
Draymen, Hackmen, Teamsters,	54
Farmers, Planters, Farm Laborers,	22
Gardeners, Florists, Nurserymen,	4
Livery Stable Keepers, Hostlers,	5
Miners and Quarrymen,	61
Sailors, Pilots, Fishermen,	3
Stock Raisers, Herders, Drivers,	1
Steam Railroad Employees,	20
Others of this class not specified,	24
ALL OTHER MALE OCCUPATIONS,.....	140
SUMMARY:—	
Males with occupation,	1,221
Males with no occupation,	27
Males under occupational age,	133
Total,	1,381
FEMALE.	
Artificial Flower and Paper Box Makers,	2
Bookkeepers, Clerks, Copyists,	30
Cigar Makers, Tobacco Workers,	6
Dressmakers, Seamstresses,	34
Housewives,	227
Laundresses,	11
Milliners,	10
Mill and Factory Operatives,	84
Musicians, Teachers of Music,	3
Nurses, Midwives,	11

Servants,	43
Stenographers, Typewriters,	8
Teachers in Schools,	3
Telegraph and Telephone Operators,	6
All other female occupations,	33

SUMMARY:—

Females with occupation,	511
Females with no occupation,	149
Females under occupational age,	107
Total,	767

A summary of the results of treatment of all cases discharged since the opening of the Sanatorium in 1907 is given in Table VIII.

During the past year the work of the Laryngeal Department has been much greater than in former years. As heretofore, the work has been performed by a Resident Laryngologist at the Camp and one at the Hospital, under the supervision of a Visiting Laryngologist. A total of twenty-seven thousand six hundred and twenty-three routine examinations and treatments were made during the year. Of one thousand nine hundred and nineteen living cases discharged, six hundred and fifty or thirty-three and nine-tenths per cent. were complicated by tuberculous laryngitis.

The classification and results of treatment of this complication are as follows:

Incipient. 375	{	Apparently cured,	42
		Arrested,	82
		Improved,	148
		Stationary,	70
		Progressive,	31
		Not examined,	2
Moderately Advanced. 216	{	Apparently cured,	3
		Arrested,	20
		Improved,	86
		Stationary,	80
		Progressive,	22
		Not examined,	5
Far Advanced. 59	{	Apparently cured,	0
		Arrested,	0
		Improved,	20
		Stationary,	17
		Progressive,	21
		Not examined,	1

The following operations were performed on the Laryngeal Service:

EAR		
Excision, Infected Cyst of Auricle,	1	
Tympanotomy,	10	
EYE		
Curettement, Meibomian Cyst,	1	
Curettement, Chalazion,	1	
Dilatation, Lachrymal Duct,	1	
Excision, Papilloma of Conjunctiva,	1	
Incision, Hordeolum,	2	
Incision, Canaliculus and Dilatation of Lachrymal Duct,	1	
Refraction,	185	
Subconjunctival Injection (Normal Saline),	4	

NOSE

Paracentesis of Maxillary Antrum,	2
Removal of Nasal Polypi,	4
Sub-Mucous Resection (Nasal Septum,)	24
Turbinotomy,	7
Turbinectomy,	8

THROAT

Incision, Peritonsillar Abscess,	1
Laryngeal Nerve Block (Alcohol),	5
Tonsillectomy and Adenoidectomy,	54
Uvulectomy,	1

During the year the following operations were performed by or upon the advice of the Consulting Surgeon:

Appendectomy,	6
Laparotomy (For gastric ulcer,)	1
Laparotomy (For tuberculous peritonitis),	1
Thoracotomy,	2
Excision, Epithelioma (Tongue),	1
Dilatation and Curettage (Uterus),	1

During the year reports were returned from the Laboratory on the examination of ten thousand four hundred (10,400) specimens of sputum and eight thousand eight hundred and forty-three (8,843) specimens of urine. Special and emergency work has also been performed incident to the developing of complicating illnesses. Chemical and microscopical examinations have been made of the milk from the various dairies supplying the Sanatorium and have been most helpful in connection with the work of inspecting such dairy farms. In addition to the above, twenty-five autopsies were performed during the year by the Resident Bacteriologist.

Thirty-two unclaimed bodies were interred in the Sanatorium cemetery during the year, a total of one hundred and fifty-two bodies having received burial by the Department since 1907.

On March 28th a case of measles developed in an eight-year-old boy admitted ten days before, and although he was promptly isolated, a second case appeared. Both cases made a satisfactory convalescence, and the Sanatorium has been free from other outbreaks of contagious diseases during the year.

The use of the "biological products of the tubercle bacillus" in the treatment of selected cases of tuberculosis has been continued with good results. A special report on this phase of our work has been prepared by the Deputy Medical Director and will follow.

The usual fire drills and routine inspection of fire fighting appliances have been observed during the year.

The systematic campaign instituted heretofore against the propagation of flies was carried out in detail and with the cooperation of adjacent property owners in allowing the institution of proper precautionary measures, the locality has been freer from flies than at any time within the history of the Sanatorium.

As in past years, much of the light work required about the Sanatorium has been performed by convalescent patients under medical supervision. Patients receiving honorariums are recruited from this corps of convalescent patients.

Farm products, including those from the truck garden, were as follows:

Apples (49½ bu.) ; Beans, Lima (15½ bu.) ; Beans, String (43 bu.) ; Beets (13 bu.) ; Cabbage (2872 heads) ; Carrots (13 bu.) ; Cauliflower (105 heads) ; Corn (225 doz.) ; Corn (1,500 bu.) ; Cucumbers (8½ doz.) ; Hay (4 tons) ; Lettuce (325 heads) ; Onions (24 doz.) ; Parsnips (11½ bu.) ; Peaches (5½ bu.) ; Peas (13½ bu.) ; Peppers (5 doz.) ; Pork (2,781 lbs.) ; Potatoes (1,950 bu.) ; Pumpkins (7 doz.) ; Radishes (50 doz.) ; Squash (33 doz.) ; Tomatoes (1,432 lbs.) ; Turnips (493½ bu.) .

During the year there were killed and delivered to the Commissary Department for use in the Sanatorium: 1,062 chickens, 757 squabs, 8 ducks, and 31 rabbits.

At the beginning of the year we had in stock at the Poultry Farm eleven hundred and thirty-eight chickens and during the year eggs to the number of eight thousand seven hundred and fifty-four and three-fourths (8,754¾) dozen were obtained. At the end of the year the stock on hand was as follows:—234 Pigeons, 34 Guineas, 45 Ducks, 5 Turkeys, 8 Rabbits, 76 Guinea Pigs, 48 Hogs, 9 Pheasants, 4 Swarms of Bees.

One hundred and seventy pounds of honey were also furnished to the Commissary Department.

One hundred and seventy-six guinea pigs were furnished the laboratories of the Department.

Six hundred tons of coal were hauled from the switch by traction engine and State teams.

Approximately three hundred cords of wood were sawed.

One thousand nine hundred tons of ice were cut and stored.

Two thousand privet hedge cuttings have been transplanted in extending and replanting existing hedges.

One thousand shrubs, comprising eighteen different varieties have also been planted during the year.

The following improvements were made during the year:

A corn crib with a capacity of a thousand bushels was erected at the Poultry Farm.

A fire line approximately fourteen feet wide was cleared and a wire designating the boundary line placed around the property.

Signs warning against trespassing or hunting on the property were placed at the required distances along the property lines.

Fruit trees on the property were pruned and sprayed with Bordeaux Mixture.

Concrete walks were laid at the main entrance to the Dispensary Building.

Twenty-six acres of land were cleared on the Monaghan field at a cost of \$135.25 an acre. Cord wood, fence posts, and stone valued at \$1,150.00 were removed.

About sixty-five lineal feet of cobble gutter were constructed at the west end of the Dispensary Building.

One hundred yards of road twenty-two feet wide were repaired on the lower end of the new road at its junction with the township road.

Twenty-eight additional lockers were installed at the Children's Hospital.

A Tent Colony, consisting of ten tents (14 x 14 ft.), each with quarters for four patients, was erected on the terrace in the rear of the Hospital. Our old Laboratory Building which we had outgrown was removed from Camp to the rear of the Hospital, placed on a concrete foundation and fitted up for the toilet and bath needs of the Tent Colony patients. The basement plan of this building provides space for a fire hose cart and water connections which materially improve our fire fighting facilities at the Hospital.

During the month of July our roads throughout the Incipient Camp, as well as the roads around the Hospital, were treated with a mixture of asphaltum and oil, which was effective in controlling the dust nuisance and helpful in preventing disintegration of the road bed.

A second story was added to the mortuary and equipped for laboratory use.

Water, gas, and hot water heating equipment were installed at the mortuary and laboratory.

A cesspool was constructed and waste connections were made to the laboratory and mortuary.

A new hard wood floor was laid in the kitchen of the main dining room building; the asphalt flooring removed from the old kitchen was laid in the dishwashing section of that building and part of the material was also placed in the toilet rooms of the Main Dining Room Building and the Administration Building.

Work in connection with the Camp Fire Girls and Boy Scout movement was taken up with our juvenile patients during the past year. The interest displayed has been marked and the results entirely gratifying and commendable.

On Memorial Day the patients marched in a body to the Sanatorium cemetery, where appropriate services were held.

On Independence Day the patients witnessed a baseball game and later in the day viewed a drill by the Boy Scouts and a fancy drill by the Camp Fire Girls.

Christmas Day was fittingly observed and enjoyed to the utmost by the patients throughout the Sanatorium. Gifts, especially for the children, were received in abundance and given out during the dinner hour. Suitable choir selections were rendered by the Roman Catholic and Episcopal choirs.

The circulation of "Spunk" has materially increased during the year, despite the confusion and embarrassment incident to several resignations from the editorial staff of the magazine.

The Sanatorium library has enjoyed a healthy growth, the number of bound volumes at the end of the year being over twenty-one hundred.

As in former years, religious services have been conducted by clergymen of the Roman Catholic, Episcopal, Lutheran, and Jewish faiths in the Gilbert Memorial Chapel and at the Hospital.

Contributions received and acknowledged during the year have been as follows:

Name of Donor.	Address.	Donation.
Alichs, Miss Clara B.	Wernersville (Galen Hall).	Clothing.
Anwill, W. E.	Harrisburg.	Clothing.
Rackenstoss, Miss Stella M.	Harrisburg.	Clothing.
Cameron School.	Harrisburg.	Clothing.
Civic Club.	Carlisle.	Clothing.
Civic Club.	Harrisburg.	Clothing.
Conelly, Thomas.	Brownsville.	Clothing.
Cook, L. W.	Harrisburg.	Children's woolen gloves.
Croft, Mrs. Mabel H.	Frankford, Phila.	Magazines.
Deckard, Oscar L.	Harrisburg.	Clothing.
Dempster, Mrs. Samuel.	Pittsburgh.	Fruit for children, Christmas.
Dispensary, State Tuberculosis.	Seranton.	Magazines, books, games.
Dixon, Mrs. Samuel G.	Bryn Mawr.	Christmas toys, overshoes for 140 children phonograph records.
Dixon, Miss Catharine.	Bryn Mawr.	Clothing.
Dunlap, William C.	Harrisburg.	Clothing.
Embroidery, The 1900.	Harrisburg.	Toys, games, books and clothing.
Emig, George B.	Harrisburg.	Clothing.
Evans, Miss Essyette.	Ardmore.	Woolen scarfs.
Foster, Mrs. Catharine J.	Larrobe.	Fruit for Christmas.
Gay, Mrs. John H.	Philadelphia.	Clothing.
Goldstein, E.	Harrisburg.	Clothing.
Hartzell, Charles.	Harrisburg.	Clothing.
Henderson, Mrs. William.	Harrisburg.	Clothing.
Horstmann, Walter.	Philadelphia.	Knitting and crocheting manuals.
Hospital Magazine Guild.	Harrisburg.	Books and picture post cards.
Kauffman Store.	Harrisburg.	Clothing.
Kelly, Mr., c/o Bowman & Co.	Harrisburg.	Socks.
Kennedy, Mrs. M. C.	Chambersburg.	Clothing.
Kloster, Miss Helen W.	Harrisburg.	Clothing.
Knapp, J. J.	Youngsville.	Clothing.
McDowall, Mrs. M. A.	Chambersburg.	Clothing.
McGovern, Charles.	Detroit, Mich.	Flowers.
Markley, W. L.	Harrisburg.	Clothing.
Messiah Lutheran Church, (Class No. 14).	Harrisburg.	Clothing.
Motter, John C.	Harrisburg.	Shoes for children.
Myers, Mrs. J. W.	Central.	"Good Housekeeping" magazines.
Needle Work Guild.	Hathboro.	Clothing.
Needle Work Guild.	Lansdowne.	Clothing.
Needle Work Guild.	Newtown.	Clothing.
Needle Work Guild.	North Wales.	Towels and clothing.
Needle Work Guild.	Philadelphia.	Clothing.
Needle Work Guild.	Shippensburg.	Clothing and picture books.
Omwake, Mrs. W. T.	Wayne-boro.	Clothing.
Parsons, Mrs. J. F.	Emporium.	Shoes and clothing for children.
Paul, Rembrandt.	New York City.	Slumber shoes.
Penrose, Miss E. W.	Carlisle.	Magazines and books.
Presbyterian Church.	Mechanicsburg.	Clothing, games, books, toys.

Name of Donor.	Address.	Donation.
Seabold, Mr.,	Harrisburg,	Clothing.
Snyder, Miss Mertie M.,	Harrisburg,	Clothing.
Stewart, Mrs. Geo. H.,	Shippensburg,	Magazines.
Stoddard, Mrs. Curwin,	Rydal,	Clothing.
Stough, Mrs. Mulford,	Shippensburg,	Magazines.
Strickler, Mrs. J. S.,	Waynesboro,	Books for library.
Stroh, Miss Helen M.,	Harrisburg,	Clothing.
Thompson, Chas. B.,	Mercersburg,	Magazines and papers.
Warrior Eagle Tribe No. 340, Red Men,	Harrisburg,	Clothing.
White, Miss Mary R.,	Carlisle,	Story books for children.
Winsor, Mrs. J. D.,	Haverford,	Pulse warmers.
Women's Auxiliary,	Bloomsburg,	Magazines.
Women's Auxiliary (St. John's Parish),	Bellefonte,	Clothing.
Woman's Club, The,	Mechanicsburg,	Magazine subscriptions.
Zion Reformed Church (Girl's Auxiliary),	Chambersburg,	Clothing, slate and pencils.

TABLE I.

MOVEMENT OF PATIENTS OF THE MONT ALTO SANATORIUM IN 1914,
ACCORDING TO SEX AND STAGE OF DISEASE.

	Total.	Incipient.	Per cent.	Moderately ad- vanced.	Per cent.	Far advanced.	Per cent.
Patients remaining January 1, 1914, ..	Total, ... 925	155	16.7	334	41.5	386	41.7
	Male, .. 625	93	.....	250	.....	282	.....
	Female, .. 300	62	.....	134	.....	104	.....
Patients admitted,	Total, ... 2,162	256	11.8	926	42.8	980	45.3
	Male, .. 1,394	126	.....	556	.....	712	.....
	Female, .. 768	130	.....	370	.....	268	.....
Patients discharged alive,	Total, ... 1,919	282	14.7	909	47.4	728	37.9
	Male, .. 1,200	149	.....	542	.....	509	.....
	Female, .. 719	133	.....	367	.....	219	.....
Patients discharged by death,	Total, ... 229	0	0.0	14	6.1	215	93.9
	Male, .. 181	0	.....	13	.....	168	.....
	Female, .. 48	0	.....	1	.....	47	.....
Patients remaining December 31, 1914,	Total, ... 939	129	13.7	387	41.2	423	45.1
	Male, .. 638	70	.....	251	.....	317	.....
	Female, .. 301	59	.....	136	.....	106	.....
Patients treated during 1914,	Total, ... *3,087	411	13.3	1,310	42.4	1,366	44.2
	Male, .. 2,019	219	.....	806	.....	994	.....
	Female, .. 1,068	192	.....	504	.....	372	.....

*Four (4) unclassified cases not included.

TABLE II.
RECORD OF RESULTS OF TREATMENT OF PATIENTS DISCHARGED FROM THE MONT ALTO SANATORIUM IN 1914,
ACCORDING TO STAGE OF DISEASE AND LENGTH OF STAY.

Admission Classification.	Discharge Classification.	Less than 3 Months.	3-6 Months.	6-9 Months.	9-12 Months.	12-18 Months.	18-24 Months.	More than 24 Months.	Average Hospital Days.	
Incipient 282 cases	Apparently cured,	2	48	15	10	22	2	1	243.7	
	Arrested,	9	54	21	8	10	2	0	185.1	
	Improved,	37	20	1	2	4	1	0	103.9	
	Progressive,	11	1	1	0	0	0	0	35.8	
	Dead,	0	0	0	0	0	0	0	0.0	
	Apparently cured,	0	18	21	10	11	0	0	290.0	
	Arrested,	30	187	50	32	19	11	5	290.9	
	Improved,	191	108	25	11	7	4	0	104.1	
	Progressive,	104	37	13	4	3	1	1	93.8	
	Dead,	5	0	1	0	4	1	3	414.8	
Moderately advanced 323 cases	Apparently cured,	0	1	1	0	1	0	0	236.0	
	Arrested,	1	37	23	15	15	4	2	253.8	
	Improved,	115	106	22	11	7	1	1	119.8	
	Progressive,	205	113	22	10	6	7	2	96.2	
	Dead,	129	33	25	5	10	7	6	143.5	
	Far advanced 913 cases	Apparently cured,	100							
		Arrested,	104							
		Improved,	65							
		Progressive,	13							
		Dead,	0							
Apparently cured,		63								
Arrested,		334								
Improved,		349								
Progressive,		163								
Dead,		14								

TABLE IV.

RECORD OF PATIENTS DISCHARGED FROM THE MONT ALTO SANATORIUM IN 1914, ACCORDING TO STAGE OF DISEASE, SEX, COLOR, AND SOCIAL CONDITION.

	Total.	White.	Black.	Other.	Single.*	Married.	Widowed.	Divorced.	Separated.
Total.	2,148	2,072	75	1	1,118 (231)	837	96	15	62
Incipient	282	275	7	0	242 (159)	85	2	0	3
Male,	149	143	6	0	133	16	0	0	0
Female,	133	132	1	0	109	19	2	0	3
Total,	909	880	29	0	452 (68)	377	44	5	31
Moderately advanced	542	526	16	0	265	251	19	0	7
Male,	367	354	13	0	187	126	25	5	24
Female,	728	705	23	0	307 (3)	359	36	7	19
Total,	509	498	11	0	227	249	17	3	13
Far advanced	219	207	12	0	80	110	19	4	6
Male,	229	212	16	1	117 (1)	86	14	3	9
Female,	181	171	9	1	94	63	9	3	7
Total,	48	41	7	0	23	13	5	0	2
Dead									

*In parenthesis appears in each group the number of these single persons that are under fifteen.

TABLE V.

RECORD OF NEGRO PATIENTS DISCHARGED FROM THE MONT ALTO SANATORIUM IN 1914, ACCORDING TO STAGE OF DISEASE AND RESULTS OF TREATMENT.

Classification.	Total.		Apparently cured.		Arrested.		Improved.		Progressive.		Dead.	
	Total.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	
Total,	55	.....	5	6.7	13	18.0	29	38.7	13	17.3	16	21.3
Incipient,	7	9.3	3	4.0	12	21.7	12	28.8	0	0.0	0	0.0
Moderately advanced,	29	38.7	1	1.3	8	10.7	16	21.3	4	5.3	0	0.0
Far advanced,	39	52.0	1	1.3	12	29.7	11	14.7	9	12.0	16	21.3

TABLE VI.

RECORD OF PATIENTS DISCHARGED FROM THE MONT ALTO SANATORIUM IN 1914, ACCORDING TO STAGE OF DISEASE, SEX, NATIVITY, AND PARENTAL NATIVITY.

	Incipient.			Moderately Advanced.			Far Advanced.			Dead.		
	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.
Total,	2,148	282	149	133	542	367	728	509	219	229	181	48
United States,	1,570	242	131	111	632	275	538	378	160	158	129	29
Ireland,	87	1	1	1	32	15	34	22	9	20	9	11
Germany,	42	5	5	5	21	17	4	15	6	6	5	1
Italy,	55	7	2	5	33	24	13	12	1	4	3	1
Hungary,	96	18	8	10	43	27	34	24	10	12	12	1
Russia,	191	7	7	7	100	69	62	43	19	11	11	1
Slavonia,*	4	1	1	1	2	2	1	7	1	1	1	1
Poland,	7	3	3	3	4	4	4	14	10	17	11	6
Scandinavia,	96	9	8	6	46	31	24	14	10	17	11	6
Other foreign,	10	1	1	1	1	1	1	1	1	1	1	1
Unstated,	10	1	1	1	1	1	1	1	1	1	1	1
Total,	2,148	282	149	133	542	367	728	509	219	229	181	48
Nativity of Father.												
United States,	971	156	79	77	384	217	339	232	107	92	76	16
Ireland,	292	20	10	10	115	65	118	80	32	39	26	13
Germany,	160	10	5	5	68	43	50	54	17	28	21	7
Italy,	85	11	10	1	42	27	15	23	4	7	6	1
Hungary,	119	14	6	9	57	36	24	24	12	12	12	1
Russia,	233	32	16	16	120	81	70	48	21	11	11	1
Slavonia,*	21	2	2	2	6	4	2	9	2	2	2	2
Poland,	7	3	3	3	4	4	4	14	10	17	11	6
Scandinavia,	96	9	8	6	46	31	24	14	10	17	11	6
Other foreign,	206	28	13	10	82	56	61	41	20	24	18	6
Unstated,	61	9	4	6	24	10	14	10	4	14	9	6

*I. e. other "Slaves."

Nativity of Mother.	2,148	282	149	133	909	542	367	728	509	219	229	181	48
Total	2,148	282	149	133	909	542	367	728	509	219	229	181	48
United States	1,017	162	82	80	403	225	178	352	234	118	100	81	19
Ireland	596	18	9	9	120	67	53	127	96	31	41	58	13
Germany	347	14	6	8	61	39	22	50	37	13	22	17	5
Italy	80	10	10	.....	42	27	15	21	18	3	7	6	1
Hungary	118	6	.....	.....	52	33	20	37	35	12	11	11	.....
Russia	224	29	16	13	115	78	37	69	49	26	11	11	.....
Poland	21	1	1	.....	7	4	3	11	9	2	2	.....	.....
Scandinavia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other foreign	185	25	11	11	87	56	20	52	35	17	35	15	8
Unstated	50	8	5	3	21	11	19	9	6	5	12	10	.....

*I. e. other "Slaves."

TABLE VII.

COUNTY RESIDENCE OF PATIENTS TREATED AT THE MONT ALTO
SANATORIUM IN 1914.

County.	Discharged.	Remaining.	County.	Discharged.	Remaining.
Total,	2,148	939	Jefferson,	12	5
Adams, .....	.....	2	Juniaata,	1	7
Allegheny,	128	54	Lackawanna,	83	40
Armstrong,	5	3	Lancaster,	35	7
Beaver,	6	2	Lawrence,	3	1
Bedford,	5	1	Lebanon,	14	10
Blair,	7	2	Lehigh,	17	6
Bradford,	18	6	Luzerne,	129	58
Berks,	21	8	Lycoming,	22	16
Bucks,	16	8	McKean,	9	.....
Butler,	10	4	Mercer,	11	4
Cambria,	14	7	Mifflin,	7	1
Cameron, .....	.....	.....	Monroe,	2	1
Carbon,	2	5	Montgomery,	34	10
Centre, .....	.....	.....	Montour,	4	3
Chester,	28	10	Northampton,	39	25
Clarion,	3	.....	Northumberland,	25	8
Clearfield,	8	6	Perry,	3	2
Clinton,	6	4	Pike,	1	.....
Columbia,	20	5	Potter,	6	2
Crawford,	2	1	Schuylkill,	51	23
Cumberland,	12	6	Snyder,	1	1
Dauphin,	104	43	Somerset,	6	2
Delaware,	46	19	Sullivan, .....	.....	.....
Elk,	4	2	Susquehanna,	1	2
Erie,	29	6	Tioga,	5	2
Fayette,	10	2	Union,	2	3
Forest, .....	.....	.....	Venango,	7	5
Franklin,	11	5	Warren,	11	8
Fulton,	2	.....	Washington,	9	3
Greene, .....	.....	.....	Wayne,	4	.....
Huntingdon,	1	2	Westmoreland,	26	17
Indiana,	2	1	Wyoming,	4	1
			York,	30	21
			Philadelphia,	1,014	430

TABLE VIII.

SUMMARY OF RESULTS OBTAINED IN THE TREATMENT OF 12,074 CASES AT THE MONT ALTO SANATORIUM, 1907 TO 1914 INCLUSIVE.

		Total.	Per cent.	White.	Black and other.	Male.	Female.	Married.	Single. [§]
Total,....	.....	*12,074	.....	11,629	445	7,540	4,534	5,654	6,429 (586)
Incipient.	Total,	1,567	13.0	1,528	39	839	728	414	1,153 (362)
	Apparently cured,	261	16.6	254	7	117	144	39	22 (169)
	Arrested,	588	37.5	573	15	314	274	140	418 (150)
	Improved,	595	38.0	586	9	346	249	187	408 (93)
	Progressive,	120	7.6	112	8	59	61	46	74 (10)
	Dead,	3	0.2	3	0	3	0	2	1 (0)
Moderately Advanced.	Total,	4,711	39.0	4,581	130	2,963	1,848	2,369	2,342 (178)
	Apparently cured,	213	4.5	210	3	92	121	55	158 (29)
	Arrested,	1,428	30.3	1,401	27	797	631	634	794 (82)
	Improved,	2,078	44.1	2,012	66	1,328	750	1,183	895 (61)
	Progressive,	908	19.3	879	29	574	334	469	439 (6)
	Dead,	84	1.8	79	5	72	12	28	56 (0)
Far Advanced.	Total,	5,796	48.0	5,520	276	3,838	1,958	2,871	2,925 (46)
	Apparently cured,	19	0.3	18	1	13	6	6	13 (1)
	Arrested,	586	10.1	567	19	377	209	253	333 (12)
	Improved,	1,902	32.8	1,839	63	1,239	663	996	906 (12)
	Progressive,	2,241	38.7	2,148	93	1,438	803	1,159	1,082 (12)
	Dead,	1,048	18.1	948	100	771	277	457	591 (9)

*Thirty-four unclassified cases not included.

§In parenthesis the number of these single persons under 15 years of age.

REPORT ON RESULTS OBTAINED FROM THE USE OF THE BIOLOGICAL PRODUCTS OF THE TUBERCLE BACILLUS (SUSPENSION OF DEAD TUBERCLE BACILLI, AND EXTRACT OF TUBERCLE BACILLI, OR "DIXON'S FLUID") AT THE PENNSYLVANIA STATE SANATORIUM FOR TUBERCULOSIS, NO. 1, MONT ALTO, DURING THE YEAR 1914.

BY DR. JOHN BERRY.

The following report presents results obtained from the use of the Biological Products of the Tubercle Bacillus at the Mont Alto Sanatorium during the year ending December 31, 1914.

The products used have been the same as in previous years, viz: Tubercle Bacilli Extract and Suspension of Dead Tubercle Bacilli, prepared at the Department of Health Laboratories after the method originally described by Dr. Samuel G. Dixon.

On January 1, 1914, there were under treatment one hundred and forty-seven patients, of whom eighty-five were males and sixty-two were females. On December 31, 1914, there remained under treatment one hundred and thirty-two patients of whom seventy-two were males and sixty were females.

During the year ending December 31, 1914, two hundred and seventy-eight cases treated with the Biological Products of the Tubercle Bacillus were discharged. Of these sixty-three were Incipient, one hundred and ninety-two Moderately Advanced, and twenty-three Far Advanced.

Seventy-two patients, of whom fifty-three were males and nineteen were females, remained under treatment for a period of less than three months. Of these fifteen were classified on admission as Incipient, fifty-four as Moderately Advanced, and three as Far Advanced.

Of the fifteen Incipient cases remaining under treatment less than three months, four, or twenty-six and seven-tenths per cent., were discharged as Disease Arrested; and the remaining eleven, or seventy-three and three-tenths per cent., as Improved. Of these cases fourteen, or ninety-three and three-tenths per cent., gained weight, the average gain being nine and one-tenth pounds, while one patient lost two and five-tenths pounds. The average duration of stay of this group of patients was forty-five days.

Of the fifty-four Moderately Advanced cases remaining under treatment for less than three months, sixteen, or twenty-nine and six-tenths per cent., were discharged as Disease Arrested; thirty-six, or sixty-six and seven-tenths per cent., as Improved; one, or one and

eight-tenths per cent., as Progressive; while one, or one and eight-tenths per cent., died. Of these cases fifty-one, or ninety-four and four-tenths per cent., gained weight, the average gain being nine and two-tenths pounds. The weight of two, or three and seven-tenths per cent., remained stationary, while one patient lost one pound. The average duration of stay of this group of patients was sixty and five-tenths days.

The three Far Advanced cases remaining under treatment less than three months all gained weight, the average gain being four and seven-tenths pounds, and were discharged as Improved. The average duration of stay of these cases was fifty-five and six-tenths days.

One hundred and twenty-one cases, of whom seventy-two were males and forty-nine were females, remained under treatment for a period varying from three to six months. Of these thirty were classified on admission as Incipient, eighty-four as Moderately Advanced, and seven as Far Advanced.

Of the thirty Incipient cases remaining under treatment for a period varying from three to six months, seventeen, or fifty-six and seven-tenths per cent., were discharged as Apparently Cured; eleven, or thirty-six and seven-tenths per cent., as Disease Arrested; one, or three and three-tenths per cent., as Improved; and one, or three and three-tenths per cent., as Progressive. Of these cases, twenty-nine, or ninety-six and seven-tenths per cent., gained weight, the average gain being twelve and eight-tenths pounds, while one patient lost eight and eight-tenths pounds. The average duration of stay of this group of patients was one hundred and thirty-two and three-tenths days.

Of the eighty-four Moderately Advanced cases remaining under treatment for a period varying from three to six months, twenty, or twenty-three and eight-tenths per cent., were discharged as Apparently Cured; forty-seven, or fifty-five and nine-tenths per cent., as Disease Arrested; and the remaining seventeen, or twenty and two-tenths per cent., as Improved. Of these cases, eighty-one, or ninety-six and four-tenths per cent., gained weight, the average gain being fifteen and eight-tenths pounds, while three, or three and six-tenths per cent., lost weight, the average loss being one pound. The average duration of stay of this group of patients was one hundred and thirty-two and seven-tenths days.

Of the seven Far Advanced cases remaining under treatment for a period varying from three to six months, four, or fifty-seven and one-tenth per cent., were discharged as Disease Arrested, and three, or forty-two and eight-tenths per cent., as Improved. All of these patients gained weight, the average gain being seven and eight-tenths pounds. The average duration of stay of this group of patients was one hundred and forty-five days.

Eighty-five patients, of whom fifty-one were males and thirty-four were females, remained under treatment for a period of six months or over. Of these eighteen were classified on admission as Incipient, fifty-four as Moderately Advanced, and thirteen as Far Advanced.

Of the eighteen Incipient cases remaining under treatment for a period of six months or over, eight, or forty-four and four-tenths per cent., were discharged as Apparently Cured; eight, or forty-four and four-tenths per cent., as Disease Arrested; and two, or eleven and one-tenth per cent., as Improved. All of these cases gained weight, the average gain being twelve pounds. The average duration of stay of this group of patients was three hundred and seventeen and one-tenth days.

Of the fifty-four Moderately Advanced cases remaining under treatment for a period of six months or over, twenty-one, or thirty-eight and nine-tenths per cent., were discharged as Apparently Cured; twenty-two, or forty and seven-tenths per cent., as Disease Arrested; seven, or thirteen per cent., as Improved; three, or five and five-tenths per cent., as Progressive; while one died. Of these cases fifty-one, or ninety-four and four-tenths per cent., gained weight, the average gain being sixteen pounds, while three, or five and five-tenths per cent., lost weight, the average loss being seven and seven-tenths pounds. The average duration of stay of this group of patients was three hundred and fourteen and three-tenths days.

Of the thirteen Far Advanced cases remaining under treatment for a period of six months or over, seven, or fifty-three and eight-tenths per cent., were discharged as Diseases Arrested; three, or twenty-three and one-tenth per cent., as Improved; while three, or twenty-three and one-tenth per cent., died. Of these cases twelve, or ninety-two and three-tenths per cent., gained weight, the average gain being twelve and three-tenths pounds, while one lost thirty-five pounds. The average duration of stay of this group of patients was two hundred and eighty-three days.

The age distribution among the two hundred and seventy-eight patients included in this report was as follows, the youngest being twelve and the oldest sixty-one years of age.

23	or	8.3%	were	between	11	and	15	years	inclusive.
67	or	24.1%	were	between	16	and	20	years	inclusive.
99	or	35.6%	were	between	21	and	30	years	inclusive.
60	or	21.6%	were	between	31	and	40	years	inclusive.
24	or	8.6%	were	between	41	and	50	years	inclusive.
4	or	1.4%	were	between	51	and	60	years	inclusive.
1	or	0.4%	were	between	61	and	70	years	inclusive.

As previously stated in describing the results of treatment five cases included in this report died, two of which were classified at the time of admission as Moderately Advanced and three as Far Advanced. The direct cause of death of these cases was as follows:

Appendicitis, Gangrenous,	1	Pneumonia, Lobar,	1
Meningitis, Tuberculous,	1	Tuberculosis, Pulmonary,	1
Peritonitis, Acute Tuberculous, ...	1		

It appears that death was in but one instance due to Pulmonary Tuberculosis and this was also the only case that did not gain in weight and make satisfactory progress otherwise prior to the development of the complicating condition which caused death.

It is of interest to note the outcome regarding seven negro patients treated with the Biological Products of the Tubercle Bacillus during the past year and included in this report. Five of them had been admitted as Moderately Advanced and two as Far Advanced. One was discharged as Apparently Cured, four as Disease Arrested, and two as Improved. These results, while not representing a sufficient number of cases to warrant any definite conclusions, are nevertheless most encouraging when the relative susceptibility of the Negro race to the action of the Tubercle Bacillus is considered.

Tables II to IV inclusive show the changes which occurred in the more important symptoms, tabulated according to the duration of treatment.

Tuberculous Laryngitis occurred as a complication in ninety-four, or thirty-three and eight-tenths per cent., of the cases included in this report. The process at the time of admission was classified as Incipient in seventy-three, or seventy-seven and seven-tenths per cent., as Moderately Advanced in seventeen, or eighteen and one-tenth per cent.; and as Far Advanced in four, or four and two-tenths per cent. At the time of discharge this complication was classified as Apparently Cured in eighteen, or nineteen and one-tenth per cent., as Arrested in thirty-two, or thirty-four per cent.; as Improved in thirty-six, or thirty-eight and three-tenths per cent.; as Progressive in six, or six and four-tenths per cent.; while two, or two and one-tenth per cent., did not report for examination at the time of discharge and the result of treatment, accordingly, could not be properly classified.

In summarizing the results obtained by the use of the Biological Products of the Tubercle Bacillus during the past year, we find that of the two hundred and seventy-eight cases discharged, sixty-six, or twenty-three and seven-tenths per cent., were Apparently Cured; one hundred and nineteen, or forty-two and eight-tenths per cent., were Arrested; eighty-three, or twenty-nine and eight-tenths per cent., were Improved; while the disease remained Progressive in but ten, or three and six-tenths per cent., including those that died.

A summary of the condition subsequent to discharge of eight hundred and six persons that were treated with the Biological Products of the Tubercle Bacillus while at the Sanatorium is shown in Table V. It is of interest to note that of the cases later traced and reported, seven hundred and sixty-seven, or ninety-five and two-tenths per cent., were reported as living, and of this number the condition of six hundred and thirty-eight, or eighty-three and two-tenths per cent., had improved or remained stationary. Of even more significance is the fact that of the four hundred and ninety-two cases discharged with the disease under control (Arrested or Apparently Cured), the process had remained quiescent in four hundred and thirty, or eighty-seven and four-tenths per cent.

TABLE I.

SUMMARY OF THE RESULTS OBTAINED IN TWO HUNDRED AND SEVENTY-EIGHT CASES TREATED WITH THE BIOLOGICAL PRODUCTS OF THE TUBERCLE BACILLUS AT THE MONT ALTO SANATORIUM DURING THE YEAR 1914.

Cases Under Treatment Less than Three Months.

Classification.	Sex.		Apparently Curved.		Disease Arrested.		Improved.		Progressive.		Dead.		Gained in Weight.		Ave. Gain.		Weight Stationary.		Lost in Weight.		Ave. Hosp. Days.	
	M.	F.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	Lbs.	%	No.	%	No.	%	Lbs.	%
Incipient, Moderately advanced, Far ad- vanced,	13	2	15	0	9.0	4	25.7	11	73.3	0	0.0	0	0.0	14	93.3	9.1	0	0.0	1	6.7	2.5	45.0
	39	15	54	0	0.0	16	29.6	36	66.7	1	1.8	1	1.8	51	94.4	9.2	2	3.7	1	1.9	1.0	69.5
	1	2	3	0	0.0	0	0.0	3	100.0	0	0.0	0	0.0	3	100.0	4.7	0	0.0	0	0.0	0.0	55.6
Total.	53	19	72	0	0.0	20	27.8	50	69.4	1	1.4	1	1.4	68	94.4	9.1	2	2.8	2	2.8	2.8	56.7

Cases Under Treatment from Three to Six Months.

Incipient, Moderately advanced, Far ad- vanced,	18	12	30	17	56.7	11	36.7	1	3.3	1	3.3	0	0.0	29	96.7	12.8	0	0.0	1	3.3	8.8	132.3
	18	26	44	29	65.9	47	55.9	17	38.6	0	0.0	0	0.0	81	96.4	15.8	0	0.0	3	3.6	1.0	132.7
	6	1	7	0	0.0	4	57.1	3	42.8	0	0.0	0	0.0	7	100.0	7.8	0	0.0	0	0.0	0.0	115.0
Total.	42	49	91	37	39.6	62	51.2	21	17.3	1	0.8	0	0.0	117	96.7	14.6	0	0.0	4	3.3	2.9	132.5

Cases Under Treatment Six Months and Over.

Incipient, Moderately advanced, Far ad- vanced,	7	11	18	8	44.4	8	44.4	2	11.1	0	0.0	0	0.0	18	100.0	12.0	0	0.0	0	0.0	0.0	317.1
	37	19	56	21	38.9	22	40.7	7	13.0	3	5.5	1	1.8	51	91.4	16.0	0	0.0	3	5.5	7.7	314.3
	3	1	4	6	9.0	7	53.8	3	23.1	0	0.0	3	23.1	12	92.3	12.3	0	0.0	1	7.7	35.0	283.0
Total.	51	31	82	29	34.1	37	43.5	12	14.1	3	3.5	1	4.7	81	95.3	11.6	0	0.0	4	4.7	14.6	211.2

TABLE II.

IMPORTANT SYMPTOMATIC CHANGES OCCURRING IN SIXTY-THREE INCIDENT CASES TREATED IN 1914 AT THE MONT ALTO SANATORIUM WITH THE BIOLOGICAL PRODUCTS OF THE TUBERCLE BACILLUS.

Symptoms.	Period of Treatment.	Total.	Absent on admission.		Per cent.	Developed.	Per cent.	Present on admission.		Per cent.	Disappeared.	Per cent.	Improved.	Per cent.	Unchanged.	Per cent.	Progressive.	Per cent.
			No.	Per cent.				No.	Per cent.									
Cough,	{ Less than three months,	15	2	13.3	0	0.0	13	86.7	4	30.8	6	46.1	3	23.1	0	0.0		
	{ Three to six months,	30	11	36.7	0	0.0	19	63.3	16	84.2	2	10.5	0	0.0	1	5.3		
	{ Six months and over,	18	9	50.0	0	0.0	9	50.0	6	66.7	3	33.3	0	0.0	0	0.0		
Expectoration,	{ Less than three months,	15	1	6.7	0	0.0	14	93.3	3	21.4	8	57.1	3	21.4	0	0.0		
	{ Three to six months,	30	10	33.3	0	0.0	20	66.7	16	80.0	3	15.0	0	0.0	1	5.0		
	{ Six months and over,	18	8	44.4	0	0.0	10	55.5	6	60.0	4	40.0	0	0.0	0	0.0		
Hoarseness,	{ Less than three months,	15	7	46.7	0	0.0	8	53.3	5	62.5	0	0.0	3	37.5	0	0.0		
	{ Three to six months,	30	24	80.0	0	0.0	6	20.0	4	66.7	1	16.7	1	16.7	0	0.0		
	{ Six months and over,	18	15	83.3	0	0.0	2	11.1	1	50.0	0	0.0	1	50.0	0	0.0		
Pleurisy,	{ Less than three months,	15	8	53.3	0	0.0	7	46.7	2	28.6	1	14.3	4	57.1	0	0.0		
	{ Three to six months,	20	22	73.3	0	0.0	8	26.7	7	87.5	0	0.0	1	12.5	0	0.0		
	{ Six months and over,	18	13	72.2	0	0.0	5	27.8	4	80.0	1	20.0	0	0.0	0	0.0		
Night sweats,	{ Less than three months,	15	7	46.7	0	0.0	8	53.3	8	100.0	0	0.0	0	0.0	0	0.0		
	{ Three to six months,	30	20	66.7	0	0.0	10	33.3	10	100.0	0	0.0	0	0.0	0	0.0		
	{ Six months and over,	18	10	55.5	0	0.0	8	44.4	8	100.0	0	0.0	0	0.0	0	0.0		
Indigestion,	{ Less than three months,	15	12	80.0	0	0.0	3	20.0	0	0.0	1	33.3	2	66.7	0	0.0		
	{ Three to six months,	30	28	93.3	0	0.0	2	6.7	2	100.0	0	0.0	0	0.0	0	0.0		
	{ Six months and over,	18	18	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
Fatigue,	{ Less than three months,	15	6	40.0	0	0.0	9	60.0	3	33.3	4	44.4	2	22.2	0	0.0		
	{ Three to six months,	30	11	36.7	0	0.0	19	63.3	18	94.7	1	5.3	0	0.0	0	0.0		
	{ Six months and over,	18	9	50.0	0	0.0	9	50.0	6	66.7	2	22.2	1	11.1	0	0.0		

TABLE III.

IMPORTANT SYMPTOMATIC CHANGES OCCURRING IN ONE HUNDRED AND NINETY *MODERATELY ADVANCED CASES TREATED IN 1914 AT THE MONT ALTO SANATORIUM WITH THE BIOLOGICAL PRODUCTS OF THE TUBERCLE BACILLUS

Symptoms.	Period of Treatment.	Total.	Absent on admission.		Developed.		Per cent. on admission.		Disappeared.		Per cent.		Improved.	Per cent.	Unchanged.	Per cent.	Progressive.	Per cent.
			No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.								
Cough.	{ Less than three months,	53	4	7.5	0	0	49	92.4	9	18.4	24	49.0	16	32.5	16	32.5	0	0.0
	{ Three to six months,	84	11	13.1	0	0.0	73	86.9	38	52.0	33	45.2	1	1.1	1	1.1	0	0.0
	{ Six months and over,	53	8	15.1	0	0.0	45	81.9	28	62.2	14	31.1	1	2.2	1	2.2	2	4.4
Expectoration.	{ Less than three months,	53	4	7.5	0	0.0	49	92.4	7	14.3	27	55.1	15	30.5	15	30.5	0	0.0
	{ Three to six months,	84	13	15.5	0	0.0	71	84.5	31	48.7	38	53.5	2	2.8	2	2.8	0	0.0
	{ Six months and over,	53	8	15.1	0	0.0	45	84.9	28	62.2	14	31.1	0	0.0	0	0.0	3	6.7
Hoarseness.	{ Less than three months,	53	28	52.8	0	0.0	25	47.2	11	44.0	7	8.0	12	48.0	12	48.0	0	0.0
	{ Three to six months,	84	43	51.2	0	0.0	41	48.8	33	80.5	7	17.1	1	2.4	1	2.4	0	0.0
	{ Six months and over,	53	26	49.0	0	0.0	27	50.9	23	85.2	3	11.1	1	3.7	1	3.7	0	0.0
Pleurisy.	{ Less than three months,	53	29	54.7	0	0.0	24	45.3	8	33.3	11	45.8	4	16.7	4	16.7	1	4.2
	{ Three to six months,	84	39	55.9	0	0.0	37	41.0	30	81.1	6	16.2	1	2.7	1	2.7	0	0.0
	{ Six months and over,	53	25	47.2	0	0.0	28	52.8	25	89.3	2	7.1	0	0.0	0	0.0	1	3.6
Night sweats.	{ Less than three months,	53	34	64.1	0	0.0	19	35.8	18	94.7	1	5.3	0	0.0	0	0.0	0	0.0
	{ Three to six months,	84	45	53.6	0	0.0	39	46.4	38	97.4	1	2.6	0	0.0	0	0.0	0	0.0
	{ Six months and over,	53	29	54.7	0	0.0	24	45.3	24	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Indigestion.	{ Less than three months,	53	33	62.3	0	0.0	20	37.7	8	40.0	3	15.0	9	45.0	9	45.0	0	0.0
	{ Three to six months,	84	63	75.0	0	0.0	21	25.0	16	76.2	3	14.3	2	9.5	2	9.5	0	0.0
	{ Six months and over,	53	43	81.1	1	2.3	10	18.9	10	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Fatigue.	{ Less than three months,	53	15	28.3	0	0.0	38	71.7	15	39.5	15	39.5	7	18.4	7	18.4	1	2.6
	{ Three to six months,	84	21	25.0	0	0.0	63	75.0	52	84.5	10	19.3	0	0.0	0	0.0	0	0.0
	{ Six months and over,	53	13	24.5	1	7.7	40	75.5	37	92.3	2	5.0	0	0.0	0	0.0	1	2.9

* 2 cases discharged by death not included.

TABLE IV.
 IMPORTANT SYMPTOMATIC CHANGES OCCURRING IN TWENTY *FAR ADVANCED CASES TREATED IN 1914 AT THE
 MONT ALTO SANATORIUM WITH THE BIOLOGICAL PRODUCTS OF THE TUBERCLE BACILLUS.

Symptoms.	Period of Treatment.	Total.	Absent on admission.	Per cent.	Developed.	Per cent.	Present on admission.	Per cent.	Disappeared.	Per cent.	Improved.	Per cent.	Unchanged.	Per cent.	Progressive.	Per cent.
Cough,	Less than three months,	3	0	0.0	0	0.0	3	100.0	0	0.0	2	66.7	1	33.3	0	0.0
	Three to six months,	7	0	0.0	0	0.0	10	100.0	1	14.3	5	71.4	0	0.0	1	14.3
	Six months and over,	10	0	0.0	0	0.0	10	100.0	4	40.0	6	60.0	0	0.0	0	0.0
Expectoration,	Less than three months,	2	0	0.0	0	0.0	2	100.0	0	0.0	1	50.0	1	50.0	1	50.0
	Three to six months,	7	0	0.0	0	0.0	7	100.0	3	42.8	3	42.8	0	0.0	1	14.3
	Six months and over,	10	1	10.0	0	0.0	9	90.0	2	22.2	7	77.8	0	0.0	0	0.0
Hoarseness,	Less than three months,	3	2	66.7	0	0.0	1	33.3	0	0.0	1	100.0	0	0.0	0	0.0
	Three to six months,	7	2	28.6	0	0.0	4	57.1	2	28.6	2	28.6	0	0.0	0	0.0
	Six months and over,	10	5	50.0	0	0.0	5	50.0	2	40.0	3	60.0	0	0.0	0	0.0
Pleurisy,	Less than three months,	3	1	33.3	0	0.0	2	66.7	1	50.0	1	50.0	0	0.0	0	0.0
	Three to six months,	7	4	57.1	0	0.0	3	42.8	2	28.6	1	14.3	0	0.0	0	0.0
	Six months and over,	10	5	50.0	1	10.0	5	50.0	3	60.0	2	40.0	0	0.0	0	0.0
Night sweats,	Less than three months,	3	0	0.0	0	0.0	3	100.0	3	100.0	0	0.0	0	0.0	0	0.0
	Three to six months,	7	3	42.8	0	0.0	4	57.1	4	100.0	0	0.0	0	0.0	0	0.0
	Six months and over,	10	3	30.0	0	0.0	7	70.0	7	100.0	0	0.0	0	0.0	0	0.0
Indigestion,	Less than three months,	3	2	66.7	0	0.0	1	33.3	1	100.0	0	0.0	0	0.0	0	0.0
	Three to six months,	7	3	42.8	0	0.0	4	57.1	3	75.0	1	25.0	0	0.0	0	0.0
	Six months and over,	10	5	50.0	0	0.0	5	50.0	5	100.0	0	0.0	0	0.0	0	0.0
Fatigue,	Less than three months,	3	0	0.0	0	0.0	3	100.0	1	33.3	2	66.7	0	0.0	0	0.0
	Three to six months,	7	1	14.3	0	0.0	6	85.7	3	50.0	3	50.0	0	0.0	0	0.0
	Six months and over,	10	2	20.0	0	0.0	8	80.0	5	62.5	3	37.5	0	0.0	0	0.0

*3 cases discharged by death not included.

TABLE V.

SUMMARY OF THE CONDITION SUBSEQUENT TO DISCHARGE OF EIGHT HUNDRED AND SIX (806) CASES TREATED WITH THE BIOLOGICAL PRODUCTS OF THE TUBERCLE BACILLUS AT THE MONT ALTO SANATORIUM.

Admission Classification.	Discharge Classification.	Upfollow Classification.	Total.	Per cent.	Interval Since Discharge.			
					6 to 12 months.	12 to 18 months.	18 to 24 months.	24 months and over.
Apparently cured 67.		Improved,	30	44.8	11	0	7	10
		Stationary,	31	46.3	15	5	9	12
		Progressive,	6	8.9	1	1	2	3
		Dead,	0	0.0	0	0	0	
Arrested 109.		Improved,	66	60.6	25	13	14	14
		Stationary,	33	28.4	11	5	7	11
		Progressive,	12	11.0	3	4	2	3
		Dead,	0	0.0	0	0	0	0
Improved 65.		Improved,	31	52.3	16	4	3	11
		Stationary,	17	26.1	4	9	2	11
		Progressive,	13	20.0	5	4	1	3
		Dead,	1	1.5	0	1	0	0
Progressive 8.		Improved,	5	62.5	2	0	1	3
		Stationary,	3	37.5	1	2	0	0
		Progressive,	0	0.0	0	0	0	0
		Dead,	0	0.0	0	0	0	0
Incident 249.								

TABLE V—Continued.

Admission Classification.	Discharge Classification.	Upfollow Classification.	Total.	Per cent.	Interval Since Discharge.			
					6 to 13 months.	13 to 18 months.	18 to 24 months.	24 months and over.
Moderately advanced 458.	Apparently cured 68.	Improved,	34	56.0	15	8	5	6
		Stationary,	27	39.7	9	5	7	6
		Progressive,	6	8.8	2	1	1	2
		Dead,	1	1.5	0	0	0	
	Arrested 206.	Improved,	102	50.0	41	19	17	26
		Stationary,	72	34.9	25	15	13	19
		Progressive,	28	13.6	14	4	5	5
		Dead,	3	1.4	1	0	1	1
Moderately advanced 458.	Improved 158.	Improved,	88	55.7	31	18	11	28
		Stationary,	27	17.1	13	2	4	8
		Progressive,	43	22.1	17	8	5	5
		Dead,	3	5.1	6	0	2	
	Progressive 26.	Improved,	10	38.5	4	3	2	1
		Stationary,	4	15.4	2	1	0	0
		Progressive,	9	34.6	3	1	3	2
		Dead,	3	11.5	1	2	0	0

Apparently cured 0.	Improved,	0	0.0	0	0	0	0	0
	Stationary,	0	0.0	0	0	0	0	0
	Progressive,	0	0.0	0	0	0	0	0
	Dead,	0	0.0	0	0	0	0	0
Arrested 42.	Improved,	14	33.3	3	1	5	5	5
	Stationary,	22	52.4	3	6	2	2	11
	Progressive,	6	14.3	4	0	1	1	1
	Dead,	0	0.0	0	0	0	0	0
Improved 39.	Improved,	6	15.4	2	1	0	0	3
	Stationary,	9	23.1	4	3	0	0	2
	Progressive,	12	30.8	2	2	1	1	3
	Dead,	12	30.8	2	3	3	3	4
Progressive 18.	Improved,	4	22.2	2	0	1	1	1
	Stationary,	1	5.6	0	0	0	0	1
	Progressive,	2	11.1	2	0	0	0	0
	Dead,	11	61.1	3	0	0	0	0

ear advanced 56.

STATISTICS RELATING TO CASES OF TUBERCULOSIS DISCHARGED FROM THE MONT ALTO SANATORIUM, COMPILED FROM ADMISSION HISTORIES, SANATORIUM RECORDS, AND UPFOLLOW DATA AS REPORTED BY DISPENSARY NURSES FOR THE YEAR 1914.*

BY DR. FRED. C. JOHNSON AND DR. JOHN BERRY.

Herewith we present the report of discharged cases traced in 1914, as compiled by Dr. Wilmer R. Batt.

Table I shows the admission, discharge, and upfollow classification with the numbers in each grouping relating to the interval since discharge from the Sanatorium. The table also shows the percentage for each subdivision in relation to the immediately preceding section of the tabulation.

Table II shows the the subsequent attendance of these cases at the various Dispensaries.

Table III shows a comparison between cases treated with and without the Biological Products of the Tubercle Bacillus in each classification, numbers and percentages in each grouping.

The total number of cases represented in this report is 1,608. Of this number, the Dispensary nursing staff were not able to obtain sufficient data to permit of final classification as to condition on 180 cases, or 11.2 per cent. The Sanatorium admission classification of the total number was as follows:

(A) Incipient,	325 or 20.2%
(B) Moderately Advanced,	739 or 45.9%
(C) Far Advanced,	544 or 33.8%

Of the 325 incipient cases:

(A 1) 95 or 29.2% were discharged as apparently cured,
(A 2) 143 or 44.0% were discharged as arrested,
(A 3) 80 or 24.6% were discharged as improved,
(A 4) 7 or 2.2% were discharged as progressive.

Of the 739 moderately advanced cases:

(B 1) 67 or 9.1% were discharged as apparently cured,
(B 2) 303 or 41.0% were discharged as arrested,
(B 3) 273 or 36.9% were discharged as improved,
(B 4) 96 or 13.0% were discharged as progressive.

Of the 544 far advanced cases:

(C 1) 4 or 0.7% were discharged as apparently cured.
(C 2) 111 or 20.4% were discharged as arrested.
(C 3) 211 or 38.8% were discharged as improved,
(C 4) 218 or 40.1% were discharged as progressive.

*A further discussion of some of the upfollow statistics of the two sanatoria may be found in the general report of the Commissioner.

Of the 95 cases admitted as incipient and discharged as apparently cured, the follow-up report was as follows:

- (A 1) 8 or 8.4%, no data,
57 or 60.0%, were reported as improved,
25 or 26.3%, were reported as stationary,
5 or 5.3%, were reported as progressive.

Of the 143 cases admitted as incipient and discharged as arrested, the follow-up report was as follows:

- (A 2) 11 or 7.7%, no data,
84 or 58.7%, were report as improved,
30 or 21.0%, were reported as stationary,
17 or 11.9%, were reported as progressive,
1 or 0.7%, had died.

Of the 80 cases admitted as incipient and discharged as improved, the follow-up report was as follows:

- (A 3) 11 or 13.7%, no data,
42 or 52.5%, were reported as improved,
14 or 17.5%, were reported as stationary,
7 or 8.7%, were reported as progressive,
6 or 7.5%, had died.

Of the 7 cases admitted as incipient and discharged as progressive, the follow-up report was as follows:

- (A 4) 1 or 14.3%, no data,
5 or 71.4%, were reported as improved,
1 or 14.3%, were reported as progressive.

Of the 67 cases admitted as moderately advanced and discharged as apparently cured, the follow-up report was as follows:

- (B 1) 5 or 7.5%, no data,
40 or 59.7%, were reported as improved,
16 or 23.9%, were reported as stationary,
6 or 8.9%, were reported as progressive.

Of the 303 cases admitted as moderately advanced and discharged as arrested, the follow-up report was as follows:

- (B 2) 4 or 14.5%, no data,
124 or 40.9%, were reported as improved,
77 or 25.4%, were reported as stationary,
47 or 15.5%, were reported as progressive,
11 or 3.6%, had died.

Of the 273 cases admitted as moderately advanced and discharged as improved, the follow-up report was as follows:

- (B 3) 35 or 12.8%, no data,
96 or 35.2%, were reported as improved,
53 or 19.4%, were reported as stationary,
51 or 18.7%, were reported as progressive,
38 or 13.9%, had died.

Of the 96 cases admitted as moderately advanced and discharged as progressive, the follow-up report was as follows:

- (B 4) 7 or 7.3%, no data,
18 or 18.7%, were reported as improved,
4 or 4.2%, were reported as stationary,
21 or 21.9%, were reported as progressive,
46 or 47.9%, had died.

Of the 4 cases admitted as far advanced and discharged as apparently cured, the follow-up report was as follows:

- (C 1) 1 or 25.0%, no data,
1 or 25.0%, were reported as stationary,
2 or 50.0%, were reported as progressive.

Of the 111 cases admitted as far advanced and discharged as arrested, the follow-up report was as follows:

- (C 2) 16 or 14.4%, no data,
31 or 27.9%, were reported as improved,
31 or 27.9%, were reported as stationary,
20 or 18.0%, were reported as progressive,
13 or 11.7%, had died.

Of the 211 cases admitted as far advanced and discharged as improved, the follow-up report was as follows:

(C 3)	29 or 13.7%,	no data,
	41 or 19.4%,	were reported as improved,
	27 or 12.8%,	were reported as stationary,
	44 or 20.9%,	were reported as progressive,
	70 or 33.2%,	had died.

Of the 218 cases admitted as far advanced and discharged as progressive, the follow-up report was as follows:

(C 4)	12 or 5.5%,	no data,
	10 or 4.6%,	were reported as improved,
	8 or 3.7%,	were reported as stationary,
	34 or 15.6%,	were reported as progressive,
	154 or 70.6%,	had died.

Of the 1,608 cases on which follow-up data were recorded, 339 or 21.1 per cent. were reported as dead. Of this latter number, 224 or 66.1 per cent. were reported as dead within one year of leaving the Sanatorium, and of this number, 129 or 57.6 per cent. had died within six months.

It is noteworthy that of the 339 cases that died, 237 or 69.9 per cent. were classified as Far Advanced on admission to the Sanatorium and of this number, 154 or 65.0 per cent. were discharged as Progressive.

Of the 1,269 living cases reported upon, the record of Dispensary attendance is as follows:

No attendance,	593 or 46.7%
Attendance,	676 or 53.3%

Of the 676 cases reported as attending the Dispensary subsequent to discharge, 298 or 44.1 per cent. were reported as attending regularly, whereas the attendance of 378 or 55.9 per cent. was described as irregular.

CONCERNING CASES TREATED WITH THE PRODUCTS OF THE TUBERCLE BACILLUS.

Of the 1,089 living cases included in the report and upon whom sufficient data were returned to permit of classification as regards present condition, 216 or 19.8 per cent. were treated with the Biological Products of the Tubercle Bacillus at the Sanatorium. The subsequent medical history of these cases, according to admission and discharge classification, follows:

Incipient.

Treated,	76 or 26.5%
Not treated,	211 or 73.5%

Of the 76 incipient cases treated, the discharge record was as follows:

Apparently cured,	30 or 39.5%
Arrested,	33 or 43.4%
Improved,	10 or 13.1%
Progressive,	3 or 3.9%

Of the 30 incipient cases discharged as apparently cured, the follow-up record was as follows:

Improved,	16 or 53.3%
Stationary,	11 or 36.7%
Progressive,	3 or 10.0%

Of the 33 incipient cases discharged as arrested, the follow-up record was as follows:

Improved,	19 or 57.6%
Stationary,	8 or 24.2%
Progressive,	6 or 18.2%

Of the 10 incipient cases discharged as improved, the follow-up record was as follows:

Improved,	8 or 80.0%
Stationary,	1 or 10.0%
Progressive,	1 or 10.0%

Of the 3 incipient cases discharged as progressive, the follow-up record was as follows:

Improved,	3 or 100.0%
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Moderately Advanced.

Treated,	126 or 22.8%
Not treated,	427 or 77.2%

Of the 126 moderately advanced cases treated, the discharge record was as follows:

Apparently cured,	27 or 21.4%
Arrested,	56 or 44.4%
Improved,	37 or 29.4%
Progressive,	6 or 4.8%

Of the 27 moderately advanced cases discharged as apparently cured, the follow-up record was as follows:

Improved,	18 or 66.7%
Stationary,	7 or 25.9%
Progressive,	2 or 7.4%

Of the 56 moderately advanced cases discharged as arrested, the follow-up record was as follows:

Improved,	31 or 55.3%
Stationary,	15 or 26.8%
Progressive,	10 or 17.8%

Of the 37 moderately advanced cases discharged as improved, the follow-up record was as follows:

Improved,	21 or 56.7%
Stationary,	8 or 21.6%
Progressive,	8 or 21.6%

Of the 6 moderately advanced cases discharged as progressive, the follow-up record was as follows:

Improved,	3 or 50.0%
Progressive,	3 or 50.0%

Far Advanced.

Treated,	14 or 5.6%
Not treated,	235 or 94.4%

Of the 14 cases treated, the discharge record was as follows:

Arrested,	10 or 71.4%
Improved,	3 or 21.4%
Progressive,	1 or 7.1%

Of the 10 far advanced cases discharged as arrested, the follow up record was as follows:

Improved,	5 or 50.0%
Stationary,	2 or 20.0%
Progressive,	3 or 30.0%

Of the 3 far advanced cases discharged as improved, the follow up record was as follows:

Improved,	1 or 33.3%
Stationary,	1 or 33.3%
Progressive,	1 or 33.3%

Of the 1 far advanced case discharged as progressive, the follow up record was as follows:

Improved,	1 or 100.0%
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Body Weight:—The subsequent weight record according to admission classification of 1,269 cases included in this report was as follows:

Incipient—318 Cases.

No data,	32 or 10.1%
Gained,	158 or 49.7%
Stationary,	31 or 9.7%
Lost,	97 or 30.5%

Moderately Advanced—644 Cases.

No data,	98 or 15.2%
Gained,	218 or 33.8%
Stationary,	65 or 10.1%
Lost,	263 or 40.8%

Far Advanced—307 Cases.

No data,	63 or 20.5%
Gained,	68 or 22.1%
Stationary,	36 or 11.7%
Lost,	140 or 45.6%

Notes on Domestic Conditions:—No data were reported concerning the sleeping quarters in 167 cases; 268 used no sleeping precautions; 687 had separate rooms; 136 while not having separate rooms, occupied separate beds; 4 had sleeping tents, and 7 had sleeping porches.

No report of the sanitary condition of rooms or dwellings was obtained in 177 cases.

1,009 dwellings were reported as clean.
53 dwellings were reported as fair.
30 dwellings were reported as poor.

Notes on Sputum:—The follow up report as to the presence of Tubercle Bacilli in the sputum of the 1,269 living cases was as follows:

No data,	173
No examinations,	584
Negative,	322
Positive,	190

Notes on Sex, Age, Etc:—The sex, color, social condition, and age of the 1,608 cases, according to admission classification, were as follows:

INCIPIENT—325 Cases.

Sex:

Male,	159	Female,	166
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Color.

Males.		Females.	
Black,	5	Black,	7
White,	154	White,	159
Total,	159	Total,	166

Social Condition.

Males.		Females.	
Single,	118	Single,	116
Married,	36	Married,	35
Widowers,	2	Widows,	11
Divorced,	2	Divorced,	1
Separated,	1	Separated,	3
Total,	159	Total,	166

Males.		Age.	Females	
5-9 years,	.....	8	5-9 years,	.....
10-14 years,	.....	46	10-14 years,	.....
15-19 years,	.....	41	15-19 years,	.....
20-29 years,	.....	33	20-29 years,	.....
30-39 years,	.....	19	30-39 years,	.....
40-49 years,	.....	8	40-49 years,	.....
50-59 years,	.....	2	50-59 years,	.....
60-69 years,	.....	2	60-69 years,	.....
Total,	.....	159	Total,	.....

Average Age.

Male, 21 years Female, 22.3 years

MODERATELY ADVANCED—739 Cases.

Males.		Sex.	Females.	
Male,	.....	406	Female,	.....
Color.				
Males.			Females.	
Black,	.....	9	Black,	.....
White,	.....	397	White,	.....
Total,	.....	406	Total,	.....

Males.		Social Condition.	Females.	
Single,	.....	202	Single,	.....
Married,	.....	175	Married,	.....
Widowers,	.....	16	Widows,	.....
Divorced,	.....	6	Divorced,	.....
Separated,	.....	7	Separated,	.....
Total,	.....	406	Total,	.....

Males.		Age.	Females.	
5-9 years,	.....	2	5-9 years,	.....
10-14 years,	.....	19	10-14 years,	.....
15-19 years,	.....	46	15-19 years,	.....
20-29 years,	.....	130	20-29 years,	.....
30-39 years,	.....	92	30-39 years,	.....
40-49 years,	.....	76	40-49 years,	.....
50-59 years,	.....	30	50-59 years,	.....
60-69 years,	.....	11	60-69 years,	.....
Total,	.....	406	Total,	.....

Average Age.

Male, 32.2 years Female, 29.1 years

FAR ADVANCED—544 Cases.

Males		Sex.	Females.	
Male,	.....	335	Female,	.....
Color.				
Males			Females.	
Black,	.....	14	Black,	.....
White,	.....	321	White,	.....
Total,	.....	335	Total,	.....

Social Condition.

Single,	175	Single,	96
Married,	133	Married,	75
Widowers,	17	Widows,	25
Divorced,	4	Divorced,	7
Separated,	6	Separated,	6
Total,	335	Total,	209

Age.

Males.		Females.	
5-9 years,	0	5-9 years,	0
10-14 years,	0	10-14 years,	1
15-19 years,	24	15-19 years,	22
20-29 years,	115	20-29 years,	79
30-39 years,	106	30-39 years,	66
40-49 years,	56	40-49 years,	28
50-59 years,	29	50-59 years,	11
60-69 years,	5	60-69 years,	2
Total,	335	Total,	209

Average Age.

Male, 38.8 years Female, 31.3 years

Duration of Treatment:—The average length of stay in the Sanatorium of the 1,608 cases reported was as follows:

Incipient,	171.6 days	Far advanced,	182.7 days
Moderately advanced,	169.2 days	All classes,	174.3 days

Discharge:—The reasons for discharge from the Sanatorium of the 1,608 cases reported upon were as follows:

Voluntary,	1,428	By request,	3
Dismissed,	13	Transferred to Cresson,	1
Deserted,	3		
To pay roll,	71		
Against advice,	89	Total,	1,608

CONCERNING OCCUPATIONS.

The history of patients as regards working capacity prior to the onset of present illness, at the time of admission to the Sanatorium, and subsequent to discharge according to admission classification, was as follows:

Incipients.	
Males 155:	
Under occupational age,	54
No occupation prior to the onset of the present illness,	16

Of the 16 cases with no occupation prior to onset of present illness, one was occupied on admission to Sanatorium and 8 at present.

Total occupied on admission,	56
Average weekly income of 54 cases,	\$10.39

There were 45 cases of occupational age with no occupation on admission to the Sanatorium; of these 26 cases were reported as occupied at present and no data were reported on 5 cases.

There were 56 cases occupied on admission to the Sanatorium; of these 41 were reported as occupied at present and no data were reported on 6 cases.

Total occupied at present,	67
Average weekly income of 60 cases,	\$11.01

Females—163.

Under occupational age,	44
No occupation prior to the onset of present illness,	20

Of the 20 cases with no occupation prior to the onset of present illness, 3 were occupied on admission to the Sanatorium and 7 at present.

Total occupied on admission,	83
Average weekly income of 55 cases,	\$5.80

(The 28 cases occupied as housewives are not included in income computations).

There were 36 cases of occupational age with no occupation on admission to the Sanatorium; of these 16 were reported as occupied at present and no data were reported on 1 case.

There were 83 cases occupied on admission to the Sanatorium; of these 60 were reported as occupied at present and no data were reported on 10 cases.

Total occupied at present,	76
Average weekly income of 38 cases,	\$8.05

(The 33 cases occupied as housewives are not included in income computations).

Moderately Advanced.

Males—338:

Under occupational age,	21
No occupation prior to onset of present illness	14

Of the 14 cases with no occupation prior to the onset of present illness 2 were occupied on admission to the Sanatorium and 5 at present.

Total occupied on admission,	187
Average weekly income of 182 cases,	\$11.90

There were 130 cases of occupational age with no occupation on admission to the Sanatorium; of these 56 were reported occupied at present and no data were reported on 21 cases.

There were 187 cases occupied on admission to the Sanatorium; of these 119 were reported as occupied at present and no data were reported on 28 cases.

Total occupied at present,	175
Average weekly income of 174 cases,	\$10.91

Females—306:

Under occupational age,	13
No occupation prior to onset of present illness,	45

Of the 45 cases with no occupation prior to the onset of present illness, one was occupied on admission to the Sanatorium and 14 at present.

Total occupied on admission,	185
Average weekly income of 119 cases,	\$6.80

(The 66 cases occupied as housewives are not included in income computations).

There were 108 cases of occupational age with no occupation on admission to the Sanatorium; of these 43 were reported as occupied at present and no data were reported on 13 cases.

There were 185 cases occupied on admission to the Sanatorium; of these 141 were reported as occupied at present and no data were reported on 13 cases.

Total occupied at present,	184
Average weekly income of 107 cases,	\$7.37

(The 70 cases occupied as housewives not included in income computations).

Far Advanced.

Males—183:

Under occupational age,	0
No occupation prior to onset of present illness,	6

Of the 6 cases with no occupation prior to the onset of present illness, none were occupied on admission to the Sanatorium, while 2 are at present.

Total occupied on admission,	101
Average weekly income of 99 cases,	\$11.32

There were 82 cases of occupational age with no occupation on admission to the Sanatorium; of these, 21 were reported as occupied at present, and no data were reported on 6 cases.

There were 101 cases occupied on admission to the Sanatorium; of these 39 were reported as occupied, and for 25 there were no data.

Total occupied at present,	60
Average weekly income of 58 cases,	\$10.07

Females—124:

Under occupational age,	1
No occupation prior to onset of present illness,	15

Of the 15 cases with no occupation prior to onset of present illness, 2 were occupied on admission to the Sanatorium, and 2 at present,

Total occupied on admission,	68
Average weekly income of 38 cases,	\$7.00

(The 30 cases occupied as housewives are not included in income computations).

There were 55 cases of occupational age with no occupation on admission to the Sanatorium; of these 8 were reported as occupied at present and no data were reported on 9 cases.

There were 68 cases occupied on admission to the Sanatorium; of these 40 were reported as occupied at present and no data were reported on 10 cases.

Total occupied at present,	48
Average weekly income of 20 cases,	\$6.15

(The 28 cases occupied as housewives are not included in income computations).

Tuberculosis in the Family.—Data concerning the number of persons exposed to infection in the 1,608 families represented in the report were not obtainable in 82 families, while in the balance there were 6,476 persons exposed and of these 1,787 were reported as tuberculous.

TABLE II.

Dispensary Attendance of Patients Discharged from the Mont Alto Sanatorium, as Traced in 1914. Patients reported as dead are *not* included.

Dispensary.	Total.	No At- tendance.	Attendance.		
			Total.	Regular.	Irregular.
Total,	1,269	593	676	298	378
1. Wilkes-Barre,	69	21	48	23	25
2. York,	8	4	4	1	3
3. Erie,	11	4	7	3	4
4. Carlisle,	3	2	1	1	0
5. Lebanon,	10	7	3	3	0
6. West Chester,	0	0	0	0	0
7. Bellefonte,	0	0	0	0	0
8. Emporium,	0	0	0	0	0
9. Johnstown,	30	9	21	8	13
10. Lewistown,	3	3	3	2	1
11. Chambersburg,	0	0	0	0	0
12. Chester,	25	10	15	4	11
13. Harrisburg,	51	18	33	17	16
14. Altoona,	0	0	0	0	0
15. Butler,	13	5	8	6	2
16. Berwick,	3	3	0	0	0
17. McConnellsburg,	0	0	0	0	0
18. Honesdale,	5	2	2	2	0
19. Milford,	0	0	0	0	0
20. Pittsburgh,	102	37	65	31	34
21. Philadelphia,	450	263	182	27	155
22. Rochester,	1	1	0	0	0
23. Doylestown,	0	0	0	0	0
24. Kittanning,	2	2	0	0	0
25. New Bloomfield,	0	0	0	0	0
26. Mifflintown,	0	0	0	0	0
27. Coudersport,	0	0	0	0	0
28. Danville,	0	0	0	0	0
29. Mifflinburg,	0	0	0	0	0
30. Meyersdale,	1	0	1	1	0
31. Norristown,	3	1	2	1	1
32. Oil City,	0	0	0	0	0
33. Williamsport,	8	5	3	2	1
34. Tionesta,	0	0	0	0	0
35. New Castle,	0	0	0	0	0
36. Sharon,	7	6	1	1	0
37. Reading,	3	1	2	0	2
38. Bradford,	0	0	0	0	0
39. Lancaster,	11	7	4	2	2
40. Scranton,	38	14	24	8	16
41. Meadville,	2	2	0	0	0
42. Ridgway,	3	2	1	1	0
43. Clarion,	3	2	1	0	1
44. Towanda,	5	2	3	1	2
45. Mauch Chunk,	1	0	1	0	1
46. Lock Haven,	0	0	0	0	0
47. Huntingdon,	6	2	4	1	3
48. Indiana,	2	0	2	1	2
49. Montrose,	5	3	2	2	0
50. Selingsgrove,	0	0	0	0	0
51. Allentown,	11	1	10	5	5
52. Easton,	5	0	5	4	1
53. Shamokin,	7	3	4	1	3
54. Warren,	0	0	0	0	0
55. Monongahela,	1	0	1	1	0
56. Tunhannock,	6	3	3	1	2
57. Greensburg,	4	3	1	0	1
58. Ploga-Wellsboro,	3	0	3	3	0
59. Dushore,	1	1	0	0	0
60. Gettysburg,	0	0	0	0	0

TABLE II—Continued.

Dispensary.	Total.	No At- tendance.	Attendance.		
			Total.	Regular.	Irregular.
61. Everett,	2	0	2	2	0
62. Clearfield,	2	1	1	1	0
63. Waynesburg,	0	0	0	0	0
64. Punxsutawney,	6	4	2	1	1
65. Stronburg,	0	0	0	0	0
66. Pottsville,	22	7	15	11	4
67. Uniontown,	1	1	0	0	0
68. Hazleton,	1	1	0	0	0
69. Hastings,	0	0	0	0	0
70. Connellsville,	1	0	1	1	0
71. Mt. Carmel,	11	5	6	4	2
72. Franklin,	3	1	2	2	0
73. Jenkintown,	2	0	2	1	1
74. Columbia,	1	1	0	0	0
75. Coatesville,	4	3	1	1	0
76. Phoenixville,	0	0	0	0	0
77. Mt. Pleasant,	1	0	1	0	1
78. Lykens,	0	0	0	0	0
79. Tyrone,	0	0	0	0	0
80. Philipsburg,	3	2	1	0	1
81. McKeesport,	0	0	0	0	0
82. Bristol,	1	1	0	0	0
84. Carbondale,	6	2	4	4	0
85. Shenandoah,	19	2	17	14	3
86. Hanover,	0	0	0	0	0
87. Bangor,	2	2	0	0	0
88. Monessen,	5	2	3	2	1
89. Lansford,	1	1	0	0	0
90. Titusville,	3	0	3	0	3
91. Tamaqua,	1	0	1	1	0
92. Milton,	0	0	0	0	0
94. Pittston,	0	0	0	0	0
95. Dubois,	4	0	4	4	0
96. West Fairview,	0	0	0	0	0
97. Susquehanna,	1	0	1	0	1
98. South Bethlehem,	8	4	4	4	0
99. Corry,	1	0	1	1	0
100. Homestead,	13	4	9	7	2
101. Braddock,	6	3	3	1	2
102. Brookville,	1	0	1	1	0
103. Beaver Falls,	0	0	0	0	0
105. Washington,	4	3	1	0	1
106. Pottstown,	3	2	1	1	0
107. Philadelphia,	104	52	52	29	23
108. Waynesboro,	0	0	0	0	0
109. Wilksburg,	13	3	10	7	3
110. Sunbury,	9	2	7	5	2
111. Tarentum,	0	0	0	0	0
112. Renovo,	0	0	0	0	0
113. Nanticoke,	2	0	2	1	1
114. Brownsville,	0	0	0	0	0
115. Kane,	5	0	5	3	2
116. Cresson,	0	0	0	0	0
117. Ardmore,	0	0	0	0	0
931. Philadelphia,	71	32	42	25	17

TABLE III.
Admission, Discharge, and Upfallow Classification of Cases Treated at the Mont Alto Sanatorium with and without the Biological Products of the Tubercle Bacillus, and traced in 1914.
NTB=No Treatment. TTB=Treatment with TB Products.

Admission Classification.	Cases.		Discharge Classification.	Cases.		Upfallow Classification.	Cases.	
	NTB.	TTB.		NTB.	TTB.		NTB.	TTB.
Incipient.			Apparently cured	57=27.1%	30=33.5%	Improved,	41=71.9%	16=53.3%
			Arrested,	98=46.4%	33=43.4%	Stationary,	14=24.6%	11=36.7%
		76=26.5%.	Improved,	53=25.1%	10=13.1%	Progressive,	2=3.5%	3=10.0%
			Progressive,	3=1.4%	3=3.9%	Improved,	65=66.3%	19=57.6%
			Apparently cured			Stationary,	22=24.6%	8=24.2%
			Arrested,			Progressive,	11=11.2%	6=18.2%
			Improved,			Improved,	34=64.2%	8=80.0%
			Progressive,			Stationary,	13=24.5%	1=10.0%
						Progressive,	6=11.3%	1=10.0%
						Improved,	2=66.7%	3=100.0%
Moderately Advanced.			Progressive,	3=1.4%	3=3.9%	Stationary,	0=0.0%	0=0.0%
			Apparently cured	35=8.2%	27=21.4%	Progressive,	1=33.3%	0=0.0%
			Arrested,			Improved,	22=62.9%	13=66.7%
			Improved,			Stationary,	9=25.7%	7=25.9%
						Progressive,	4=11.4%	2=7.4%
			Arrested,	192=45.0%	56=44.4%	Improved,	99=48.4%	31=55.3%
			Improved,	163=33.1%	37=29.4%	Stationary,	62=22.3%	15=26.8%
			Progressive,	37=8.7%	6=4.8%	Progressive,	37=19.3%	10=17.8%
		126=22.8%.				Improved,	75=46.0%	21=56.7%
		427=77.2%.				Stationary,	3=27.6%	8=21.6%
					Progressive,	43=26.4%	8=21.6%	
					Improved,	15=40.5%	3=50.0%	
					Stationary,	4=10.8%	0=0.0%	
					Progressive,	18=48.6%	3=50.0%	

				Improved, Stationary, Progressive, ...	0 = 0.0% 1 = 33.3% 2 = 66.7%	0 = 0.0% 0 = 0.0% 0 = 0.0%
Far Advanced.	235 = 94.4%.	Apparently cured	3 = 1.3%	0 = 0.0%		
		Arrested,	72 = 30.6%	10 = 71.4%		
		Improved,	109 = 46.4%	3 = 21.4%		
		Progressive, ...	51 = 21.7%	1 = 7.1%		
	14 = 5.6%.					
				Improved, Stationary, Progressive, ...	36 = 36.1% 29 = 40.3% 17 = 33.6%	5 = 50.0% 2 = 20.0% 3 = 30.0%
				Improved, Stationary, Progressive, ...	40 = 31.7% 29 = 33.8% 43 = 39.4%	1 = 33.3% 1 = 33.3% 1 = 33.3%
				Improved, Stationary, Progressive, ...	9 = 17.6% 8 = 15.7% 31 = 66.7%	1 = 100.0% 0 = 0.0% 0 = 0.0%

PENNSYLVANIA STATE SANATORIUM FOR TUBERCULOSIS
NO. 2, CRESSON.

WILLIAM G. TURNBULL, M. D., *Medical Director.*

During the year 1914, one thousand and sixty-seven patients have been treated in the Cresson Sanatorium. Of these, three hundred and nine were in the institution on January first, and seven hundred and fifty-eight were admitted during the year. Six hundred and sixteen patients were discharged alive, and eighty-eight were removed by death, leaving three hundred and sixty-three patients in the institution at the end of December. The average daily census during the year was three hundred and fifty, and the average length of stay of patients was one hundred and thirty-six days.

Of the seven hundred and fifty-eight patients admitted in the course of the year, one hundred and twenty-nine or seventeen per cent., were incipient; two hundred and ninety-five, or thirty-eight and nine-tenths per cent., moderately advanced; and three hundred and thirty-four, or forty-four and one-tenth per cent., far advanced.

Of the seven hundred and four patients discharged in the course of the year, one hundred and sixteen were classified as incipient on admission, two hundred and seventy-six as moderately advanced, and three hundred and twelve as far advanced.

Of the one hundred and sixteen incipient cases, twelve, or ten and three-tenths per cent., were discharged as apparently cured; seventy-three, or sixty-two and nine-tenths per cent., as arrested; thirty or twenty-five and nine-tenths per cent., as improved; and one, or nine tenths of one per cent., as progressive.

Of the two hundred and seventy-six moderately advanced cases, four, or one and four tenths per cent., were discharged as apparently cured; one hundred, or thirty-six and two-tenths per cent., as arrested; one hundred and thirty-eight, or fifty per cent., as improved; thirty-two, or eleven and six-tenths per cent., as progressive; and two, or seven-tenths of one per cent., had died.

Of the three hundred and twelve far advanced cases, nineteen, or six and one-tenth per cent., were discharged as arrested; ninety-six, or thirty and eight-tenths per cent., as improved; one hundred and eleven, or thirty-five and six-tenths per cent., as progressive; and eighty-six, or twenty-seven and five-tenths per cent., had died.

Altogether, then, of the seven hundred and four patients discharged within the year, sixteen, or two and three-tenths per cent., were discharged as apparently cured; one hundred and ninety-two, or twenty

seven and three-tenths per cent., as arrested; two hundred and sixty-four, or thirty-seven and five-tenths per cent., as improved; one hundred and forty-four, or twenty and four-tenths per cent., as progressive; and eighty-eight, or twelve and five-tenths per cent., had died.

The average age of the incipient cases discharged alive during the year was eighteen and five-tenths years; of the moderately advanced twenty-nine and one-tenth years; of the far advanced twenty-seven and two-tenths years; and of patients dying in the institution thirty-two and three-tenths years. The average age of all classes was twenty-eight and seven-tenths years.

The average patient came from a house with three and three tenths rooms, and belonged to a family of four and five-tenths members. The average monthly income of this average family was \$53.18.

Of the incipient cases discharged alive in 1914, one hundred and five gained in weight, nine lost weight, and two were stationary. The average gain was nine and four-tenths pounds. Of the moderately advanced cases discharged alive, two hundred and eighteen gained in weight, forty-seven lost weight, and nine were stationary. The average gain was eleven pounds. Of the far advanced cases discharged alive, one hundred and nineteen gained in weight, ninety-four lost weight, and thirteen were stationary. The average gain was nine and four-tenths pounds.

In the early summer of 1914 the Health Colony Club was organized at Pittsburgh with the object of assisting the State in the work with the patients of the Pittsburgh Dispensary. According to an arrangement with the Commissioner of Health this club purchased and equipped ten tents (each fourteen feet square with a double length fly) to be erected on the grounds of the Sanatorium. These tents were used for especially needy cases making application at the Pittsburgh Dispensary for admission to the Sanatorium and unable to be cared for at home during the period of waiting for their regular turn of admission. By arrangement with the Commissioner of Health the State furnished all care for these patients after they were admitted to the tents. When their regular turn for admission to the Sanatorium arrived they were transferred to State beds and other needy ones were sent by the Pittsburgh Dispensary to take their places in the tents.

A report on these cases is of peculiar interest because it emphasizes the advantage and in some instances the vital necessity of the immediate admission of cases after application. Inasmuch as these cases were selected by the Pittsburgh Dispensary as especially needy cases it is fair to assume that they were in the opinion of the Dispensary physician patients who were not doing well under Dispensary

treatment and who in all probability would have continued doing badly during the necessary time of waiting for their regular turn of admission to the Sanatorium.

Eighty-six patients have been cared for in these tents and afterwards admitted to the Sanatorium or died in the tents. The average stay of these patients in the tents before admission to the Sanatorium was sixty-six and two-thirds days. At the time of regular admission to the Sanatorium sixty-five of these patients were improved, fifteen were unimproved and six had died as tent patients. The sixty-five improved patients had gained six hundred and fifty-five pounds in weight, an average gain of ten pounds each. In short, out of eighty-six patients who were doing badly at home and most of whom would probably have continued to do badly for an average time of nine and a half weeks, while waiting for admission to the Sanatorium, sixty-five were admitted to the Sanatorium at the regular time much improved and with an average gain in weight of ten pounds.

A society of friends of the Monessen Dispensary has also bought and equipped two tents to be used in the same way as the Pittsburgh tents.

During the year attention has been paid to improving the social condition of our patients and furnishing them with harmless recreation or employment. Results are already evident in a better feeling on the part of the patients toward the institution, greater cheerfulness, and an increased length of stay in the institution. The children have been organized into a school under the care of capable teachers, who are also patients, and an outdoor school house has been built for their use. The school work has been carefully graded according to the physical condition of each child, no child being allowed to work more than two hours a day. All idea of competitive work has been kept out of the school. All the ordinary branches have been taught to a necessary extent but particular attention has been paid to nature work and manual training. The study of flowers, trees, birds, butterflies, and insects has been attractive and beneficial.

During the season when such out-door work is impossible, basketry, rug weaving, cutting and sewing, darning and patching, have been subjects receiving special attention.

Classes in sewing, fancy work, quilting, rug-weaving, and knitting have been organized for the women.

Wood working has been introduced to a limited extent for the boys and men and it is hoped that with increased equipment it may be possible to develop this occupation still further during the coming year.

By their own efforts our patients and employees have raised money for the purchase of an excellent moving picture machine and a piano. Through the kindness of the Pittsburgh Photoplay Company we have

been furnished four reels of interesting pictures each week and have therefore been able to enjoy a moving picture entertainment weekly.

In addition to this, several amateur dramatic entertainments have been given by the patients during the year. There is need of a special building to be used for amusement purposes. At present the only available place is the large dining room for patients, and the use of this room is inconvenient and causes a great amount of extra work on the part of the housekeeping department.

An effort is being made to place the patients of the institution more and more on a self-governing basis. The conduct and discipline of the patients in all social gatherings has been successfully entrusted to a committee selected by the patients themselves.

In the children's department the self-governing idea has been further developed and practically all matters of discipline are now settled by the children themselves under proper guidance in their own organized court.

An account of the important changes in our medical staff together with a full list of the staff and the other employees of the Sanatorium during the past year may be found in that part of the general report of the Commissioner which is reserved for these matters.

The patients of the institution have reason to thank their many friends for the numerous and useful donations which have been received during the year. Not merely at Christmas time but all through the year we have received many gifts that have shown not only good will and liberality but also intelligent thought for the real needs of our patients. In several places societies have been organized for the purpose of helping and we have been asked to report all personal needs of our patients to these societies.

The following is a partial list of donors, as it is quite impracticable to include all the small gifts which have come to us.

Contributions for the Year 1914, to the Cresson Sanatorium for Tuberculosis.

- Miss Boney, Ebensburg—Clothing.
 Miss Myrtle Brown, Cresson—Clothing.
 Miss Hulda Burd, Cresson—Stockings.
 H. H. Carter, Bloomsburg—Magazines.
 Mrs. Samuel G. Dixon, Bryn Mawr—Clothing, books and games.
 Mrs. Sylvester Eckenrode, Turtle Creek—Magazines.
 Epworth League (Miss Pender), Blairsville—Literature.
 Miss Myrtle Ehrenfield, Lilley—Clothing and outing flannel.
 Miss Rachel Erk, Vandergrift—Literature.
 First Presbyterian Church (Rev. C. C. Hayes, Pastor), Johnstown—Clothing, books, games, candy and oranges.
 Mr. Jesse Fay, Altoona—Stockings.
 Mrs. Gabler, Monessen—Clothing.
 Mrs. H. B. Garland, Jeanette—Flowers.
 B. Gross, Cresson—Clothing.
 Mrs. John Herr, Cresson—Stockings and outing flannel.
 Mrs. Hildebrand, Cresson—Clothing.
 John B. Hoyt, Cresson—Magazines.
 William H. Horstmann Co., Philadelphia—Copies of Knitting and Crocheting Manual.
 Mrs. C. J. Hogue, Cresson—Clothing and magazines.
 Mrs. Fred J. Kammerer, Cresson—Clothing.
 Mrs. H. E. Lowman, Cresson—Clothing, outing flannel and literature.

Mrs. John A. Lewis, Ebensburg—Clothing and literature.
 Mrs. Eliza Lewis, Latrobe—Literature.
 Miss Margaret McMullin, Johnstown—Literature.
 William Mallingly, Wilmington, Del.—Shoes.
 Methodist Episcopal Church, Johnstown—Literature.
 Mrs. H. I. McGirk, Cresson—Clothing.
 Mrs. C. B. McFail, Pittsburgh—Yarns and clothing.
 Mrs. G. S. Mitchell, Cresson—Magazines, stockings and outing flannel.
 Epworth League (Miss Orgill), Jeannette—Copies of New Testament.
 Mrs. H. M. Potter, Cresson—Clothing.
 Miss Janet Simpson, (Epworth League), Indiana—Bibles and reading matter.
 Mrs. Charles Sleep, Johnstown—Subscription "Woman's Missionary Friend"
 Mrs. John Smith, Cresson—Clothing.
 Nathan Stouck, Cresson—Candy boxes.
 Mrs. Blair C. Seeds, Cresson—Flowers and oranges.
 Mrs. A. T. Schleigh, Crafton—Clothing, books and toys.
 Rev. Paul Weyand, Jeannette—Reading matter.
 Wm. F. Gable, Altoona—Flags.
 Johnstown Democrat, Johnstown—Flags and bunting.
 Geo. K. Kline, Johnstown—Flags.
 North American, Philadelphia—Flags.
 F. W. Woolworth & Co., Pittsburgh—Flags and crepe paper.
 Mrs. W. G. Wilson, New Castle—Flags and bunting.
 E. D. Clark, Altoona—Victrola records.
 Mr. Winter, Altoona—Victrola records.

Contributions for Moving Picture Machine and Piano.

Miss Kate Brady, Butler.
 J. M. Buck, Cresson.
 Miss Lizzie Conley, Cresson.
 E. D. Clark, Altoona.
 C. S. Clark, Bellwood.
 H. P. Davis, Cresson.
 First National Bank, Cresson.
 Dr. Joseph D. Findley.
 Miss Rheta Freiburger, Pittsburgh.
 Mrs. D. L. Gillespie, Pittsburgh.
 Dr. S. P. Glover, Altoona.
 B. Gross, Cresson.
 Dr. H. D. Hockenberry, Butler.
 Mr. T. R. Hartley, Pittsburgh.
 Mrs. David Kirk, Pittsburgh.
 Kleper Brothers, Altoona.
 Mrs. James H. Lockhart, Pittsburgh.
 Miss Minnie Mobley, Pittsburgh.
 Mrs. L. H. Mason, Jr., Pittsburgh.
 J. F. McCartin, Cresson.
 Carl Olines, Altoona.
 O. J. Pensyl, Altoona.
 Mrs. Thos. E. Pollard, Pittsburgh.
 Miss Anna Reymier, Pittsburgh.
 E. L. Study, Cresson.
 Miss Helen C. Trump, Pittsburgh.
 Miss Margaret S. Walker, Pulaski.
 J. G. Zenny, Cresson.

Special attention has been paid during the year to the utilization of by-products of the institution. A soap factory has been built where all the soap used in scrubbing and cleaning the establishment is now made from the waste grease of the kitchen and butcher shop.

All the bones from the butcher shop, kitchen, and dining rooms are now saved and ground. Part of this is used as feed on the poultry farm, the rest is stored and used in mixing fertilizer for the farm and garden.

The pig farm has been so developed that it consumes all the garbage from the kitchen and dining rooms. Two tanks of five hundred gallons capacity each have been installed at the pig farm in connection with a steam boiler, and all the garbage is hauled to these tanks where it is thoroughly mixed and boiled before being fed to the pigs. About a hundred pigs have been raised during the year.

The following work has been done in the course of the year:

The stone entrance gate and gate house have been completed and an ornamental stone watering trough has been built on the State Highway opposite our entrance gate.

A fence of twisted ribbon wire has been built around our property and a fence run across our land so as to shut off the area used for the collection of spring water.

The conduit for the power wires and telephone line to the pumping station has been finished and put in service.

Several other springs have been piped and added to our spring water supply.

A vegetable cellar of good appearance and capable of holding two thousand bushels has been built about a hundred feet back of the dining building.

A laying house to take care of a thousand hens has been added to the poultry farm. A brooder house with a capacity of a thousand chicks, and twelve colony houses, each eight by ten feet in size, have also been built. The results with the poultry farm have been encouraging and it is hoped that further additions may be made during the coming year.

A pig farm has been made in the field near the sewage disposal plant. Extensive runs have been laid out and fenced, and portable houses about six by twelve feet in size, have been placed in these runs. A concrete feeding floor a hundred and twenty feet long with concrete troughs has been built and a suitable roof built over it. A feed house with boiler and tanks and a slaughter house adjacent to it have been built.

An out-door school house has been put up for the use of the children.

The plaster walls in the hospital, connecting corridor, dining rooms and first floor of the administration building have been much improved by two coats of buff paint. The floors in the same parts of the buildings have been refilled, a strip of congoletum laid where there is much walking, and the remainder of the floor finished with shellac.

Much improvement has been made in the appearance of our grounds by grading, sodding, and planting the parts adjacent to the hospital and administration building and the two camps. The flower beds in the women's camp were much admired by every one

visiting us and much enjoyed by our patients. Fifteen hundred and thirty feet of concrete walk were built in the men's camp and along the connecting corridor. A board walk was built from the entrance gate to the power and laundry building. Considerable fallen and dead timber was cleared out of our woods and sawed at a mill installed on our grounds. In all, 167,796 board feet of lumber were sawed here during the year and used in the construction work. Stone drains have been placed in the hillside adjacent to the State Highway and the numerous springs making this unfit for cultivation have been drained away. This field has been broken up and will be added to our tillable land.

Two teams of horses were purchased during the year and will be used in hauling the coal to the institution.

TABLE I.

MOVEMENTS OF THE PATIENTS OF THE CRESSON SANATORIUM IN 1914, ACCORDING TO SEX AND STAGE OF DISEASE ON ADMISSION.

	Total.	Incipient.	Per cent.	Moderately Advanced.	Per cent.	Far Advanced.	Per cent.
Patients remaining January 1st, 1914,	Total,	50	16.2	121	39.1	138	44.7
	Male,	32	.....	42	.....	75	.....
	Female,	18	.....	79	.....	63	.....
Patients admitted during 1914,	Total,	129	17.0	285	38.9	334	44.1
	Male,	48	.....	150	.....	194	.....
	Female,	81	.....	145	.....	140	.....
Patients discharged alive during 1914,	Total,	116	18.8	274	44.5	296	36.7
	Male,	52	.....	185	.....	127	.....
	Female,	64	.....	149	.....	99	.....
Deaths during 1914,	Total,	0	0.0	2	2.3	86	97.7
	Male,	0	.....	1	.....	51	.....
	Female,	0	.....	1	.....	35	.....
Patients remaining in institution December 31, 1914,	Total,	63	17.3	140	38.6	160	44.1
	Male,	28	.....	66	.....	91	.....
	Female,	35	.....	74	.....	69	.....
Total treated during 1914,	Total,	1,607	16.8	416	39.0	472	44.2
	Male,	541	.....	192	.....	269	.....
	Female,	526	.....	224	.....	203	.....

TABLE II.
RECORD OF RESULTS FOR PATIENTS DISCHARGED FROM THE CRESSON SANATORIUM IN 1914, ACCORDING TO STAGE OF DISEASE AND PERIOD OF TREATMENT.

Admission Classification.	Discharge Classification.	Period of Treatment						Total hospital days.	Average hospital days.	
		Less than 3 months.	3 to 6 months.	6 to 9 months.	9 to 12 months.	12 to 18 months.	18 to 24 months.			
Lactipent, 116,	Apparently cured,	12	0	2	4	4	1	1	3,492	291.0
	Arrested,	73	6	47	15	3	2	0	11,612	159.1
	Improved,	39	19	6	5	0	0	0	2,139	71.3
	Progressive,	1	1	0	0	0	0	0	10	10.0
	Dead,	0	0	0	0	0	0	0	0	0.0
Moderately advanced, 276,	Apparently cured,	4	0	2	0	2	0	0	984	248.0
	Arrested,	109	7	55	25	9	4	0	17,466	174.7
	Improved,	138	59	53	16	5	5	0	16,847	122.1
	Progressive,	32	21	6	1	4	0	0	2,900	92.5
	Dead,	2	0	0	1	0	0	1	605	302.5
Far advanced, 312,	Apparently cured,	0	0	0	0	0	0	0	0	0.0
	Arrested,	19	0	6	7	3	3	0	4,668	245.4
	Improved,	96	38	39	7	7	5	0	12,704	132.3
	Progressive,	111	60	34	8	8	1	0	11,454	103.2
	Dead,	86	47	17	8	4	10	0	10,927	127.1

TABLE III.
 RECORD OF RESULTS OF TREATMENT OF PATIENTS DISCHARGED FROM THE CRESSON SANATORIUM IN 1914,
 ACCORDING TO AGE AND STAGE OF DISEASE ON ADMISSION.

Admission Classification.	Age Period.	Total.	Per cent.	Apparently cured.	Per cent.	Arrested.	Per cent.	Improved.	Per cent.	Progressive.	Per cent.	Dead.	Per cent.
	Total,	704	.....	16	2.3	192	27.3	294	37.5	144	20.4	88	12.5
	Total,	116	.....	12	10.3	73	62.9	30	25.9	1	0.9	0	0.0
Incipient.	Under 15,	52	44.8	10	19.2	25	67.3	7	13.5	0	0.0	0	0.0
	15 to 24,	37	31.9	1	2.7	22	59.5	14	37.8	0	0.0	0	0.0
	25 to 34,	17	11.6	0	0.0	9	52.9	7	41.2	1	5.9	0	0.0
	35 to 44,	6	5.2	0	0.0	4	66.7	2	33.3	0	0.0	0	0.0
	45 to 54,	2	1.7	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0
	55 and over,	1	1.7	0	0.0	0	100.0	0	0.0	0	0.0	0	0.0
	Total,	276	.....	4	1.4	100	36.2	138	50.0	32	11.6	21	7.7
	Total,	28	10.1	2	7.1	17	60.7	8	28.6	1	3.6	0	0.0
Moderately Advanced.	Under 15,	100	36.2	1	1.0	35	35.0	51	51.0	13	13.0	0	0.0
	15 to 24,	64	23.2	1	1.6	41	64.1	7	10.9	7	10.9	1	1.6
	25 to 34,	40	14.3	1	2.5	15	37.5	19	47.5	4	10.0	1	2.5
	35 to 44,	34	12.3	0	0.0	12	35.3	17	50.0	5	14.7	0	0.0
	45 to 54,	10	3.6	0	0.0	6	60.0	2	20.0	2	20.0	0	0.0
	55 and over,	2	0.7	0	0.0	0	0.0	2	100.0	0	0.0	0	0.0
	Total,	312	.....	0	0.0	19	6.1	86	27.5	111	35.6	86	27.6
	Total,	9	2.9	0	0.0	4	44.4	0	0.0	2	22.2	3	33.3
Far Advanced.	Under 15,	85	27.2	0	0.0	1	1.2	28	32.9	21	24.7	35	41.2
	15 to 24,	90	31.7	0	0.0	5	5.6	33	36.7	20	22.2	32	35.6
	25 to 34,	73	26.4	0	0.0	7	9.6	17	23.3	21	28.8	24	32.9
	35 to 44,	27	8.6	0	0.0	1	3.7	8	29.6	12	44.4	6	22.2
	45 to 54,	19	6.1	0	0.0	1	5.3	10	52.6	3	15.8	5	26.3
	55 and over,	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

TABLE IV. RECORD OF PATIENTS DISCHARGED FROM THE CRESSON SANATORIUM IN 1914, ACCORDING TO STAGE OF DISEASE AND AGE ON ADMISSION.

	Total.	-15	15-24	25-34	35-44	45-54	55 and over.
Total,	704	91	221	188	110	68	31
Incipient,	116	52	37	17	6	2	2
Moderately advanced,	274	28	100	63	39	34	10
Far advanced,	226	8	62	76	45	21	14
Dead,	88	3	22	32	20	6	5

TABLE V. RECORD OF PATIENTS DISCHARGED FROM THE CRESSON SANATORIUM IN 1914, BY SEX, COLOR, AND SOCIAL CONDITION.

	Total.	White.	Black.	Indian.	Single.*	Married.	Widowed.	Divorced.	Separated.
Total,	704	693	10	1	368 (91)	302	29	2	3
Incipient,	116	114	2	0	95 (52)	17	3	1	0
Male,....	50	50	0	0	39	11	0	0	0
Female,.	66	64	2	0	56	6	3	1	0
Moderately advanced,	274	272	1	1	152 (28)	109	11	0	2
Male,....	125	124	1	0	63	58	4	0	0
Female,.	149	148	0	1	89	51	7	0	2
Far advanced,	226	222	4	0	81 (8)	133	11	1	0
Male,....	127	126	1	0	49	74	4	0	0
Female,.	99	96	3	0	32	59	7	1	0
Deaths,	88	85	3	0	40 (3)	43	4	0	1
Male,....	52	50	2	0	27	23	2	0	0
Female,.	36	35	1	0	13	20	2	0	1

*In parenthesis is the number of these single persons who were under 15.

TABLE VI. RECORD OF NEGRO PATIENTS DISCHARGED FROM THE CRESSON SANATORIUM IN 1914, ACCORDING TO STAGE OF DISEASE AND RESULT OF TREATMENT.

Classification.	Total.	Apparently cured.	Per cent.	Arrested.	Per cent.	Improved.	Per cent.	Progressive.	Per cent.	Dead.	Per cent.
Total,*	11	0	0.0	2	18.2	4	36.4	2	18.2	3	27.3
Incipient,	2	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0
Moderately advanced,	2	0	0.0	0	0.0	2	100.0	0	0.0	0	0.0
Far advanced,	7	0	0.0	0	0.0	2	28.6	2	28.6	3	42.8

*One Indian included.

TABLE VIII.

SUMMARY OF PATIENTS DISCHARGED FROM THE CRESSON SANATORIUM DURING 1914, SHOWING RESULT OF TREATMENT ACCORDING TO COLOR, SEX, AND SOCIAL CONDITION.

	Total.	Per cent.	White.	Black.*	Male.	Female.	Married.	Single.
Total,	704	.....	693	11	356	348	336	368
Incipient.								
Total,	116	16.5	114	2	52	64	21	95
Apparently cured,	12	10.3	12	0	7	5	0	12
Arrested,	73	62.9	71	2	32	41	11	62
Improved,	30	25.9	30	0	13	17	9	21
Progressive,	1	0.9	1	0	0	1	1	0
Dead,	0	0.0	0	0	0	0	0	0
Moderately Advanced.								
Total,	276	39.2	274	2	126	150	123	153
Apparently cured,	4	1.4	4	0	1	3	1	3
Arrested,	100	36.2	100	0	41	59	34	66
Improved,	138	50.0	136	2	67	71	73	65
Progressive,	32	11.6	32	0	16	16	14	18
Dead,	2	0.7	2	0	1	1	1	1
Far Advanced.								
Total,	312	44.3	305	7	173	134	192	120
Apparently cured,	0	0.0	0	0	0	0	0	0
Arrested,	19	6.1	19	0	8	11	11	8
Improved,	96	30.8	94	2	59	37	64	32
Progressive,	111	35.6	109	2	60	51	70	41
Dead,	86	27.6	83	3	51	35	47	39

*Note: Black includes 1 Indian.

TABLE IX.

SUMMARY OF CASES DISCHARGED FROM THE CRESSON SANATORIUM DURING 1914, ACCORDING TO THE CLASSIFICATION ON DISCHARGE.

	Total.	Per cent.	White.	Black.*	Male.	Female.	Married.	Single.
Total,	704	.....	693	11	356	348	336	368
Apparently cured,	16	2.3	16	0	8	8	1	15
Arrested,	192	27.3	190	2	81	111	56	136
Improved,	264	37.5	260	4	139	125	146	118
Progressive,	144	20.4	142	2	76	68	85	59
Dead,	88	12.5	85	3	52	36	48	40

*One Indian included.

TABLE X.
RECORD OF RESULT OF TREATMENT OF LARYNGEAL INVOLVEMENT OF PATIENTS DISCHARGED FROM THE
CRESSON SANATORIUM DURING 1914.

Admission Classification.	Classification of Laryngeal Involvement.*	Per cent.	Laryngeal Condition on Discharge.				
			Apparently cured.	Improved.	Stationary.	Progressive.	Not examined.
Incipient (116).	Total,	22	6	15	0	1	0
	Incipient,	12	5	6	0	1	0
	Moderately advanced,	10	1	9	0	0	0
	Far advanced,	0	0	0	0	0	0
Moderately Advanced (274).	Total,	97	13	72	0	10	0
	Incipient,	53	11	40	0	1	0
	Moderately advanced,	39	2	28	2	1	0
	Far advanced,	5	0	4	0	0	0
Far Advanced (226).	Total,	111	5	58	19	26	3
	Incipient,	33	3	29	1	5	1
	Moderately advanced,	50	0	32	18	0	0
	Far advanced,	28	0	15	18	21	0

*Deaths not included.

TABLE XI.

COUNTY RESIDENCE OF PATIENTS TREATED AT THE CRESSON SANATORIUM DURING 1914.

Counties.	Discharges from Jan. 1, 1914 to Dec. 31, 1914.	Patients remaining Dec. 31, 1914.	Counties.	Discharges from Jan. 1, 1914 to Dec. 31, 1914.	Patients remaining Dec. 31, 1914.
Adams, .....	.....	.....	Lancaster,	1	2
Allegheny,	261	148	Lawrence,	6	4
Armstrong,	14	9	Lebanon, .....	.....	1
Beaver,	11	10	Lehigh, .....	.....	1
Bedford,	5	5	Luzerne,	13	6
Blair,	17	7	Lycoming,	1	.....
Bradford, .....	.....	.....	McKean,	3	2
Berks, .....	.....	.....	Mercer,	14	10
Bucks, .....	.....	.....	Mifflin,	2	2
Butler,	26	6	Monroe, .....	.....	.....
Cambria,	82	27	Montgomery,	2	2
Cameron,	1	.....	Montour, .....	.....	.....
Carbon,	4	.....	Northampton,	1	2
Centre, .....	.....	1	Northumberland,	1	1
Chester, .....	.....	.....	Perry, .....	.....	1
Clarion,	4	4	Philadelphia,	20	12
Clearfield,	18	11	Pike, .....	.....	.....
Clintou,	3	.....	Potter, .....	.....	.....
Columbia,	2	.....	Schuylkill,	4	2
Crawford,	7	3	Snyder, .....	.....	.....
Cumberland,	1	.....	Somerset,	13	5
Dauphin,	11	2	Sullivan, .....	.....	.....
Delaware,	2	.....	Susquehanna, .....	.....	.....
Elk,	3	1	Tioga—Wellsboro,	1	.....
Erie,	11	4	Union, .....	.....	4
Fayette,	17	11	Venango,	13	4
Forest, .....	.....	.....	Warren,	1	1
Franklin, .....	.....	.....	Washington,	32	9
Fulton, .....	.....	.....	Wayne, .....	.....	.....
Greene, .....	.....	2	Westmoreland,	46	23
Huntingdon,	8	9	Wyoming, .....	.....	.....
Indiana,	3	5	York,	1	.....
Jefferson,	15	7		704	363
Junlata,	1	.....		
Lackawanna,	2	1			

TABLE XII.

RECORD OF PATIENTS DISCHARGED FROM THE CRESSON SANATORIUM IN 1914, ACCORDING TO OCCUPATION.

	Total.	Male.	Female.
Total,	704	356	348
Under occupational age and no occupations,	315	49	266
All occupations,	389	307	82
PROFESSIONAL GROUP,	10	.....	.....
Architects, artists, teachers of arts, .....	.....	.....	.....
Clergymen, .....	.....	.....	.....
Engineers, surveyors, .....	.....	2	.....

TABLE XII.—Continued

	Total.	Male.	Female.
Journalists,			
Lawyers,			
Musicians, teachers of music,		3	
Physicians and surgeons,			1
Teachers (school),			4
Others of this class not specified,			
CLERICAL AND OFFICIAL GROUP,	30		
Bookkeepers, clerks, copyists,		24	
Bankers, brokers, officials of companies,		2	
Collectors, agents, auctioneers,		2	
Others of this class not specified,			
MERCANTILE AND TRADING GROUP,	19		
Apothecaries, pharmacists,		1	
Commercial travelers,		12	
Merchants and dealers,		4	
Hucksters and peddlers,		2	
Others of this class not specified,			
PUBLIC ENTERTAINMENT GROUP,	1		
Hotel and boarding house keepers,			
Saloon keepers, liquor dealers, bartenders,		4	
Others of this class not specified,			
PERSONAL SERVICE GROUP,	5		
Barbers and hairdressers,		3	
Janitors and sextons,			
Policemen, watchmen, detectives,		2	
Soldiers, sailors, marines,			
Others of this class not specified,			
LABORING AND SERVANT GROUP,	68		
Laborers (not agricultural),		65	
Servants,			3
MANUFACTURING AND MECHANICAL INDUSTRY GROUP,	81		
Bakers and confectioners,		3	
Blacksmiths,		1	
Boot and shoe makers,		3	
Brewers, distillers, rectifiers,			
Butchers,		3	
Cabinet makers, upholsterers,			
Carpenters and joiners,		4	
Cigar makers, tobacco workers,		4	
Clock and watch repairers, jewelers,			
Compositors, printers, pressmen,		1	
Coopers,			
Engineers and firemen (not railway),		7	
Glass blowers, glass workers,		3	
Hat and cap makers,			
Iron and steel workers,		11	
Leather makers,			
Leather workers,			
Machinists,		18	
Marble and stone cutters,		4	
Masons,		2	
Mill and factory operators (textile),		1	
Millers (flour and grits),			
Painters, glaziers,		4	
Plasterers,			
Plumbers, gas and steam fitters,		4	
Tailors,		2	
Tinners and tinware makers,		1	
Others of this class not specified,		5	
AGRICULTURAL AND TRANSPORTATION GROUP,	58		
Boatmen and canamen,			
Draymen, hackmen, teamsters,		3	
Farmers, planters and farm laborers,		8	
Gardeners, florists, nurserymen,		2	
Livery stable keepers, hostlers,			
Lumbermen and raftsmen,		2	
Miners and quarrymen,		20	
Sailors, pilots, fishermen,			
Stock raisers, herders, drovers,			
Steam railroad employees,		12	
All others of this class not specified,		1	
All other male occupations,	3		

TABLE XII.—Continued.

	Total.	Male.	Female.
ALL FEMALE OCCUPATIONS.*	82		
Artificial flower and paper box makers,			
Bookkeepers, clerks, copyists,			13
Cigar makers, tobacco workers,			1
Dressmakers, seamstresses,			12
Hotel and boarding house keepers,			
Laundresses,			
Milliners,			3
Mill and factory operatives,			6
Musicians, teachers of music,			
Nurses and midwives,			7
Servants,			25
Stenographers, typewriters,			5
Teachers in schools,			1
Telegraph and telephone operators,			2
All others,			7

*In the preparation of this list housewifery was not included as an occupation.

NOTES ON RESULTS OBTAINED FROM THE USE OF THE BIOLOGICAL PRODUCTS OF THE TUBERCLE BACILLUS AT THE PENNSYLVANIA STATE SANATORIUM FOR TUBERCULOSIS, NO 3, CRESSON, DURING THE YEAR 1914.

The following is a summary of the treatment of patients of the Sanatorium with Tubercle Bacilli Products during 1914.

In all these cases the Dixon preparation of Tubercle Bacilli Extract, or the Tubercle Bacilli Suspension was used.

The opposition on the part of the patients to the use of Tubercle Bacilli products has disappeared. On the whole the results from the use of these preparations are encouraging, in many cases the patients themselves being convinced that their improvement dates from the beginning of the use of the Tubercle Bacilli products.

TABLE I.

PATIENTS TREATED WITH TUBERCLE BACILLI PRODUCTS AT THE CRESSON SANATORIUM IN 1914.

Class.	Male.	Female.	White.	Black.	Married.	Single.	Total.	Hospital days.	Ave. hospital days.
Inclipient,	46	53	98	1	13	86	99	15,832	159.92
Moderately advanced,	89	109	198	0	77	121	198	31,313	158.14
Far advanced,	34	24	58	0	30	28	58	12,702	219.00
Total,	169	186	354	1	120	235	355	59,847	168.59

Reason for Discharge.

	Mod.		Far.	Total.
	Inclipient.	Advanced.	Advanced.	
Voluntary,	65	106	37	208
Against advice,	22	50	6	78
Failed to return from leave of absence,	3	27	3	33
Dismissed,	9	13	6	28
Deserted,	0	1	1	2
Dead,	0	1	5	6
Total,	99	198	58	355

TABLE II.
RESULT OF TREATMENT.

	Incipient.	Mod. Advanced.	Far. Advanced.	Total.
<i>Male.</i>				
Apparently cured,	7	1	0	8
Arrested,	31	40	7	78
Improved,	8	46	21	75
Progressive,	0	1	2	3
Dead,	0	1	4	5
Total,	46	89	34	169
<i>Female.</i>				
Apparently cured,	3	3	0	6
Arrested,	34	54	8	96
Improved,	16	46	12	74
Progressive,	0	6	3	9
Dead,	0	0	1	1
Total,	53	109	24	186
<i>Together.</i>				
Apparently cured,	10	4	0	14
Arrested,	65	94	15	174
Improved,	24	92	33	149
Progressive,	0	7	5	13
Dead,	0	1	5	6
Total,	99	193	52	255

TABLE III.

CLASSIFICATION AND RESULT OF TREATMENT OF LARYNGEAL TUBERCULOSIS WITH PRODUCTS OF THE TUBERCLE BACILLUS AT THE CRESSON SANATORIUM IN 1914.

Admitted As	Laryngeal Classification.	Discharged As	
Incipient.	Incipient (10).	Apparently cured,	0
		Arrested,	6
		Improved,	4
		Progressive,	0
	Moderately advanced (10).	Apparently cured,	0
		Arrested,	1
Improved,		9	
Progressive,		0	
Moderately Advanced.	Incipient (38).	Apparently cured,	0
		Arrested,	13
		Improved,	25
		Progressive,	0
	Moderately advanced (26).	Apparently cured,	0
		Arrested,	3
Improved,		22	
Progressive,		1	
Far Advanced.	Far advanced (3).	Apparently cured,	0
		Arrested,	0
		Improved,	3
		Progressive,	0
	Incipient (15).	Apparently cured,	0
		Arrested,	5
Improved,		9	
Progressive,		1	
Moderately advanced (8).	Apparently cured,	0	
	Arrested,	0	
	Improved,	4	
	Progressive,	4	
Far advanced (3).	Apparently cured,	0	
	Arrested,	0	
	Improved,	2	
	Progressive,	1	

TABLE IV.

INFLUENCE ON THE SPUTUM OF THE TREATMENT WITH PRODUCTS OF THE TUBERCLE BACILLUS AT THE CRESSON SANATORIUM IN 1914.

	Sputum Negative on Admission.		Sputum Positive on Admission.	
	Positive on Discharge.	Negative on Discharge.	Positive on Discharge.	Negative on Discharge.
Total.	23	263	40	28
Incipient,	93	4	6	1
Moderately advanced,	164	11	34	15
Far advanced,	29	8	29	21

STATISTICS RELATING TO CASES OF TUBERCULOSIS DISCHARGED FROM THE CRESSON SANATORIUM, COMPILED FROM THE ADMISSION HISTORIES, SANATORIUM RECORDS, AND UPFOLLOW DATA AS REPORTED BY DISPENSARY NURSES FOR THE YEAR 1914.*

BY DR. WILLIAM G. TURNBULL.

Herewith is presented the report of discharged cases traced in 1914.

Table I shows the admission, discharge, and upfollow classification with the numbers in each group in relation to the interval since discharge from the Sanatorium. The table also shows the percentage for each subdivision in relation to the immediately preceding section of the tabulation.

Table II shows the subsequent attendance of these cases at the various Dispensaries, exclusive of the cases as reported as dead.

Table III shows a comparison between cases treated at the Sanatorium with and without the Biological Products of the Tubercle Bacillus in each classification, with the numbers and percentage in each group. In this table the cases with insufficient data and those reported as dead are not included.

In the report are included two hundred and ninety-three cases, but for thirty-one, or ten and six-tenths per cent., the data were insufficient for a final classification, giving only the information that these persons were still alive.

*A further discussion of some of the upfollow statistics for the two sanatoria may be found in the general report of the Commissioner.

Of the two hundred and ninety-three persons traced, seventy or twenty-three and nine-tenths per cent., were reported as dead. Of this latter number, sixty-three, or ninety per cent., were reported as dead within one year of leaving the Sanatorium, and of them thirty-five, or fifty-five and five-tenths per cent., had died within six months. Of the seventy cases that died, fifty-nine, or eighty-four and three-tenths per cent., were classified as Far Advanced upon admission and of this number, forty-four, or seventy-four and six-tenths per cent., were discharged as Progressive.

Body weight:—The subsequent weight record according to admission classification of the two hundred and twenty-three *living* cases included in this report is as follows:

Incipient—69 cases.			
Gained,	30	Stationary,	3
Lost,	20	No data,	16
Moderately Advanced—96 cases.			
Gained,	40	Stationary,	5
Lost,	34	No data,	17
Far Advanced—58 cases.			
Gained,	16	Stationary,	4
Lost,	26	No data,	12

Notes on Domestic Conditions:—As reported, 75 cases used no sleeping precautions; 146 had separate rooms; 2, while not having separate rooms, occupied separate beds.

No report on the condition of rooms or dwellings was obtained in 35 cases. For 126, the dwelling was reported to be clean; for 44, fair; and for 18, poor.

Sputum:—The report concerning the sputum of the two hundred and twenty-three *living* cases was as follows:

No examinations, 168; Negative, 19; Positive, 36.

Notes on Sex, Age, etc.:—The sex, color, social status, and age of the two hundred and twenty-three cases, according to admission classification were as follows:

INCIPIENT—69 CASES.

		Sex.	
Males,	30	Females,	39
		Color.	
	Males		Females.
Black,	0	Black,	1
White,	30	White,	38
	<u>30</u>		<u>39</u>

Social Condition.

Single,	18	Single,	32
Married,	10	Married,	4
Widower,	1	Widows,	2
Divorced,	1	Divorced,	1
	<u>30</u>		<u>39</u>

Age.

5-9 years,	3	5-9 years,	2
10-14 years,	5	10-14 years,	19
15-19 years,	5	15-19 years,	11
20-29 years,	6	20-29 years,	6
30-39 years,	3	30-39 years,	0
40-49 years,	6	40-49 years,	1
50-59 years,	1	50-59 years,	0
60-69 years,	1	60-69 years,	0
	<u>30</u>		<u>39</u>

Average Age.

Males,	27.4 years	Females,	20.7 years
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MODERATELY ADVANCED—107 CASES.

Sex.

Males,	39	Females,	68
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Color.

		Color.	
		Males.	Females.
Black,	1	Black,	4
White,	38	White,	64
	<u>39</u>		<u>68</u>

Social Condition.

Single,	4	Single,	13
Married,	35	Married,	46
Widower,	0	Widows,	8
Divorced,	0	Divorced,	1
	<u>39</u>		<u>68</u>

Age.

5-9 years,	1	5-9 years,	3
10-14 years,	4	10-14 years,	8
15-19 years,	3	15-19 years,	11
20-29 years,	15	20-29 years,	26
30-39 years,	8	30-39 years,	14
40-49 years,	5	40-49 years,	4
50-59 years,	3	50-59 years,	1
60-69 years,	0	60-69 years,	1
	<u>39</u>		<u>68</u>

Average Age.

Males, 28.9 years Females, 24 7 years

FAR ADVANCED—117 CASES.

Sex.

Males, 59 Females, 58

Color.

Males.		Females.	
Black,	1	Black,	0
White,	58	White,	58
	59		58

Social Condition

Single,	30	Single,	24
Married,	25	Married,	29
Widowers,	3	Widows,	4
Divorced,	0	Divorced,	0
Separated,	1	Separated,	1
	59		58

Age.

5-9 years,	1	5-9 years,	0
10-14 years,	0	10-14 years,	3
15-19 years,	4	15-19 years,	6
20-29 years,	22	20-29 years,	14
30-39 years,	15	30-39 years,	22
40-49 years,	10	40-49 years,	8
50-59 years,	4	50-59 years,	4
60-69 years,	3	60-69 years,	1
	59		58

Average Age.

Males, 33.2 years Females, 31.9 years

Duration of Treatment:—The stay of these patients in the Sanatorium is shown by their average Hospital Days, as follows:

Incipient,	135.8	Far Advanced,	127.3
Moderately Advanced,	129.3	All Classes,	126.6

These cases were discharged from the Sanatorium for the following reasons:

Voluntary,	214	Against advice,	23
Dismissed,	5	By request,	48
Deserted,	2		

CONCERNING OCCUPATIONS.

The history of these patients as regards working capacity before the onset of the present illness, at the time of admission to the Sanatorium, and subsequent to discharge according to the admission classification, is as follows:

Of the thirty *incipient males*, eight were originally under occupational age and three had no occupation. Of the three cases with no original occupation none was occupied on admission to the Sanatorium and one is occupied at present. On admission twelve were occupied. The average weekly income of ten cases was \$9.70.

There were ten cases with no occupation on admission to the Sanatorium. Of these, five were reported as now occupied, one as unoccupied, and for four there were no data.

There were twelve cases with occupation on admission to the Sanatorium. Of these, nine were reported as now occupied and for three there were no data.

Altogether fourteen were returned as now occupied. The average weekly income of ten cases is \$9.92.

Of the thirty-nine *incipient females*, sixteen were originally under occupational age, seven had no occupation, and for two there were no data. Of the seven cases with no original occupation, one was occupied on admission to the Sanatorium, and none are occupied at present. Altogether thirteen were occupied on admission. The average income of eight cases was \$5.63. Four were housewives.

There were eight cases with no occupation on admission to the Sanatorium, and one of them is reported as now occupied.

There were thirteen cases with occupation on admission to the Sanatorium. Of these eleven were reported as now occupied, and two as unoccupied.

Thus there are occupied at present twelve persons of this group. The average income of six cases was returned as \$4.67. Four are housewives.

Of the thirty-four *moderately advanced males* reported to be alive, five were under occupational age, and for one there were no data. Altogether fifteen were occupied on admission to the Sanatorium, and their average weekly income was \$13.87.

There were thirteen cases with no occupation on admission to the Sanatorium, of whom four are reported as now occupied and six as now unoccupied; for three no data are given.

Of the fifteen cases with occupation on admission to the Sanatorium, eight were returned as now occupied, six as unoccupied, and for one there were no data.

The number at present occupied is twelve. The average weekly income of ten cases is \$12.00.

Of the sixty-two *moderately advanced females* reported to be alive, eleven were under occupational age, and sixteen had no occupation. Of the sixteen with no original occupation, none was occupied on admission and one is now occupied. Thus there were occupied on admission twenty-two. The average weekly income of thirteen cases was \$4.82. There were seven housewives.

There were twenty-nine cases with no occupation on admission to the Sanatorium, and one of these is reported as now occupied.

There were twenty-two cases having occupation on admission to the Sanatorium. Of these, fifteen were reported as now occupied, six as unoccupied, and for one there were no data.

Altogether in this series sixteen are now occupied. The average weekly income of thirteen cases is \$4.62. Three are housewives.

Of the twenty-seven *far advanced males* reported to be alive, one was under occupational age, one had no occupation, and for one there were no data. The one case with no original occupation was not occupied before admission to the Sanatorium and is now not occupied. Altogether seven were occupied on admission, and their average weekly income was \$12.00.

There were eighteen cases with no occupation on admission to the Sanatorium. Of these, four were reported as now occupied, eleven as unoccupied, and for three there were no data.

Of the seven cases with occupation on admission to the Sanatorium, two were returned as now occupied, and for five no data were reported. Thus there are six now occupied, and for five the average weekly income is returned as \$15.00.

Of the thirty-one *far advanced females* reported to be alive, two were under occupational age, and four had no occupation. Of the four with no original occupation, one was occupied before admission to the Sanatorium, and none is now occupied. There were nineteen occupied on admission. The average weekly income of one case was \$20.00. Eighteen were housewives.

There were ten cases with no occupation on admission to the Sanatorium, and of these one was reported as now occupied.

There were nineteen cases with occupation on admission to the Sanatorium, of which thirteen were reported as now occupied, and six as now unoccupied. There are then fourteen occupied at present. They have no weekly income; all are housewives.

TABLE I.

ADMISSION, DISCHARGE, AND UPFOLLOW CLASSIFICATION OF 293 CASES, WITH THE INTERVALS SINCE DISCHARGE FROM THE CRESSON SANATORIUM. CASES TRACED IN 1914.

Admitted As:	Discharged As:	Upfollowed As:	Total.	Per cent.	Interval Since Discharge.										
					Less than 6 months.	6 to 12 months.	12 to 18 months.	18 to 24 months.	24 to 30 months.	30 to 36 months.	36 to 42 months.	42 months and more.			
Apparently cured. 12=17.4%.		No data,	3	25.0	0	3	0	0	0	0	0	0	0	0	0
		Improved,	5	41.7	0	4	0	0	0	0	0	0	0	0	0
		Stationary,	3	25.0	0	2	1	0	0	0	0	0	0	0	0
		Progressive,	1	8.3	0	0	1	0	0	0	0	0	0	0	0
Incipient. 69=23.5%.		Dead,	0	0.0	0	0	0	0	0	0	0	0	0	0	0
		No data,	2	4.5	0	2	0	0	0	0	0	0	0	0	0
		Improved,	30	68.2	0	13	13	0	0	0	0	0	0	0	0
		Stationary,	11	25.0	0	8	3	0	0	0	0	0	0	0	0
Improved. 11=15.9%.		Progressive,	1	2.3	0	1	0	0	0	0	0	0	0	0	0
		Dead,	0	0.0	0	0	0	0	0	0	0	0	0	0	0
		No data,	3	97.3	0	3	0	0	0	0	0	0	0	0	0
		Improved,	3	25.4	0	1	1	0	0	0	0	0	0	0	0
Progressive. 2=2.9%.		Stationary,	3	97.3	0	3	0	0	0	0	0	0	0	0	0
		Progressive,	0	0.0	0	0	0	0	0	0	0	0	0	0	0
		Dead,	0	0.0	0	0	0	0	0	0	0	0	0	0	0
		No data,	0	0.0	0	0	0	0	0	0	0	0	0	0	0
Progressive. 2=2.9%.		Improved,	1	50.0	0	0	1	0	0	0	0	0	0	0	0
		Stationary,	1	50.0	0	1	0	0	0	0	0	0	0	0	0
		Progressive,	0	0.0	0	0	0	0	0	0	0	0	0	0	0
		Dead,	0	0.0	0	0	0	0	0	0	0	0	0	0	0

TABLE II.

DISPENSARY ATTENDANCE OF PATIENTS DISCHARGED FROM THE CRESSON SANATORIUM, AS TRACED IN 1914. CASES REPORTED AS DEAD ARE NOT INCLUDED.

Dispensary.	Number.	Total.	No At- tendance.	Attendance.	
				Regular.	Irregular.
		223	98	92	33
Wilkes-Barre,	1	14	4	7	3
York,	2	0	0	0	0
Erie,	3	4	1	2	1
Carlisle,	4	2	0	2	0
Lebanon,	5	1	0	1	0
West Chester,	6	0	0	0	0
Bellefonte,	7	0	0	0	0
Emporium,	8	0	0	0	0
Johnstown,	9	17	3	10	4
Lewistown,	10	0	0	0	0
Chambersburg,	11	0	0	0	0
Chester,	12	0	0	0	0
Harrisburg,	13	17	10	5	2
Altoona,	14	6	3	2	1
Butler,	15	13	9	1	3
Berwick,	16	0	0	0	0
McConnellsburg,	17	0	0	0	0
Honesdale,	18	1	1	0	0
Milford,	19	0	0	0	0
Pittsburgh,	20	63	28	26	9
Philadelphia (Poplar street),	21	4	4	0	0
Rochester,	22	0	0	0	0
Doylstown,	23	0	0	0	0
Kittanning,	24	5	3	2	0
New Bloomfield,	25	0	0	0	0
Mifflintown,	26	0	0	0	0
Coudersport,	27	0	0	0	0
Danville,	28	0	0	0	0
Mifflinburg,	29	0	0	0	0
Meyersdale,	30	0	0	0	0
Norristown,	31	1	1	0	0
Oil City,	32	1	1	0	0
Williamsport,	33	0	0	0	0
Tionesta,	34	0	0	0	0
New Castle,	35	0	0	0	0
Sharon,	36	0	0	0	0
Reading,	37	0	0	0	0
Bradford,	38	0	0	0	0
Lancaster,	39	0	0	0	0
Scranton,	40	0	0	0	0
Meadville,	41	1	0	1	0
Ridgway,	42	0	0	0	0
Clarion,	43	0	0	0	0
Towanda,	44	0	0	0	0
Mauch Chunk,	45	0	0	0	0
Lock Haven,	46	0	0	0	0
Huntingdon,	47	0	0	0	0
Indiana,	48	0	0	0	0
Montrose,	49	0	0	0	0
Selinsgrove,	50	0	0	0	0
Allentown,	51	0	0	0	0
Easton,	52	0	0	0	0
Shamokin,	53	0	0	0	0
Warren,	54	1	0	1	0
Monongahela,	55	1	0	1	0
Tunkhannock,	56	0	0	0	0
Greensburg,	57	7	4	3	0
Tioga,	58	3	2	1	0
DuShore,	59	1	1	0	0
Gettysburg,	60	0	0	0	0

TABLE II.—Continued.

Dispensary.	Number.	Total.	No At- tendance.	Attendance.	
				Regular.	Irregular.
Everett,	61	0	0	0	0
Clearfield,	62	2	0	1	1
Waynesburg,	63	0	0	0	0
Punxsutawney,	64	1	0	0	1
Stroudsburg,	65	0	0	0	0
Pottsville,	66	2	1	0	1
Uniontown,	67	4	0	3	1
Hazleton,	68	0	0	0	0
Hastings,	69	6	5	1	0
Connellsville,	70	1	0	0	1
Mount Carmel,	71	0	0	0	0
Franklin,	72	7	1	6	0
Jenkintown,	73	0	0	0	0
Columbia,	74	0	0	0	0
Coatesville,	75	0	0	0	0
Phoenixville,	76	0	0	0	0
Mount Pleasant,	77	1	0	1	0
Lykens,	78	0	0	0	0
Tyrone,	79	1	0	1	0
Philipsburg,	80	2	1	1	0
McKeesport,	81	0	0	0	0
Bristol,	82	0	0	0	0
Carbondale,	84	0	0	0	0
Shenandoah,	85	0	0	0	0
Hanover,	86	0	0	0	0
Bangor,	87	0	0	0	0
Monessen,	88	2	1	0	1
Lansford,	89	0	0	0	0
Titusville,	90	2	0	2	0
Tamaqua,	91	0	0	0	0
Milton,	92	0	0	0	0
Pittston,	94	0	0	0	0
DuBois,	95	1	0	1	0
West Fairview,	96	0	0	0	0
Susquehanna,	97	0	0	0	0
South Bethlehem,	98	1	1	0	0
Corry,	99	0	0	0	0
Homestead,	100	5	3	2	0
Braddock,	101	1	0	1	0
Brookville,	102	1	0	0	1
Beaver Falls,	103	0	0	0	0
Washington,	105	0	0	0	0
Pottstown,	106	0	0	0	0
Philadelphia (Frankford),	107	7	5	2	0
Waynesboro,	108	0	0	0	0
Wilkinsburg,	109	2	1	1	0
Sunbury,	110	1	0	0	1
Tarentum,	111	3	0	2	1
Reno,	112	0	0	0	0
Nanticoke,	113	0	0	0	0
Brownsville,	114	0	0	0	0
Kane,	115	0	0	0	0
Ardmore,	117	0	0	0	0
Philadelphia (So. 24th St.),	931	7	4	2	1

TABLE III.

ADMISSION, DISCHARGE, AND UPFOLLOW CLASSIFICATION OF CASES TREATED AT THE CRESSON SANATORIUM WITH AND WITHOUT THE BIOLOGICAL PRODUCTS OF THE TUBERCLE BACILLUS, AND TRACED IN 1914.

NTB=No treatment. TTB=Treated with TB-products.

Admission Classification.	Cases.		Discharge Classification.	Cases.		Upfollow Classification.	Cases.	
	NTB.	TTB.		NTB.	TTB.		NTB.	TTB.
Incipient.			Apparently cured,	3=9.7%	6=20.0%	Improved,	3=100.0%	2=33.3%
			Arrested,	21=67.7%	21=70.0%	Stationary,	3=50.0%	3=50.0%
		31=50.8%	Improved,	5=16.1%	3=10.0%	Progressive,	0=0.0%	1=16.7%
			Progressive,	2=6.5%	0=0.0%	Improved,	15=71.4%	6=23.6%
			Apparently cured,	0=0.0%	2=4.5%	Stationary,	5=23.8%	6=23.6%
Moderately Advanced.			Arrested,	17=45.9%	27=61.4%	Improved,	1=4.8%	0=0.0%
		37=45.7%	Improved,	17=45.9%	14=31.8%	Stationary,	1=50.0%	1=50.0%
			Progressive,	3=8.1%	1=2.3%	Progressive,	0=0.0%	0=0.0%
			Apparently cured,	0=0.0%	2=4.5%	Improved,	0=0.0%	1=50.0%
			Arrested,	17=45.9%	27=61.4%	Stationary,	0=0.0%	1=50.0%
		Improved,	17=45.9%	14=31.8%	Progressive,	13=76.5%	5=55.5%	
		Progressive,	3=8.1%	1=2.3%	Improved,	7=37.6%	7=25.9%	
		Apparently cured,	0=0.0%	2=4.5%	Stationary,	1=5.9%	5=18.9%	
		Arrested,	17=45.9%	14=31.8%	Improved,	12=70.6%	6=42.9%	
		Improved,	17=45.9%	14=31.8%	Stationary,	3=17.6%	3=35.7%	
		Progressive,	3=8.1%	1=2.3%	Progressive,	2=11.8%	3=21.8%	
		Apparently cured,	0=0.0%	2=4.5%	Improved,	2=66.7%	1=100.0%	
		Arrested,	17=45.9%	14=31.8%	Stationary,	0=0.0%	0=0.0%	
		Improved,	17=45.9%	14=31.8%	Progressive,	1=33.3%	0=0.0%	
		Progressive,	3=8.1%	1=2.3%	Improved,	0=0.0%	0=0.0%	

Far Advanced.	31=62.0%.	19=38.0%.	Apparently cured.	1=3.2%	0=0.0%	Improved, Stationary, Progressive,	0=0.0% 1=100.0% 0=0.0%	0=0.0% 0=0.0% 0=0.0%
			Arrested,	3=9.7%	11=57.9%	Improved, Stationary, Progressive,	0=0.0% 3=100.0% 0=0.0%	6=54.5% 2=18.2% 3=27.3%
			Improved,	18=58.1%	8=42.1%	Improved, Stationary, Progressive,	7=39.8% 4=22.2% 7=39.8%	4=50.0% 0=0.0% 4=50.0%
			Progressive,	9=29.0%	0=0.0%	Improved, Stationary, Progressive,	1=11.1% 1=11.1% 7=77.8%	0=0.0% 0=0.0% 0=0.0%

PENNSYLVANIA STATE SANATORIUM FOR TUBERCULOSIS,
NO 3, HAMBURG.

THOMAS H. A. STITES, M. D., *Medical Director.*

The Sanatorium was opened for public inspection on Saturday, October 24, 1914. His Excellency, John K. Tener, Governor of the Commonwealth of Pennsylvania, accompanied by the Commissioner of Health and his staff, went over practically the entire building and expressed himself as well pleased with the preparations for the care of tuberculous patients. A simple luncheon was served in the private and staff dining rooms. Citizens of Hamburg and vicinity turned out in large numbers in honor of the occasion and a serenade was tendered to the Governor and Commissioner of Health, by Burkey's Hamburg Band.

In addition to the Sanatorium employees, a considerable number of physicians and nurses connected with the Department's Tuberculosis Dispensaries were on hand to assist in welcoming our guests and showing them the building. All day Saturday and Sunday, October 24, and 25, a constant stream of visitors flowed through the corridors, wards, and other parts of the building.

On Monday, October 26, the patients began to arrive, their number being augmented daily until, in early December, our census showed the house filled to its capacity. During the six days, October 26, to October 31, inclusive, there were sixty-eight admissions. During the month of November, we admitted three hundred and forty-four patients, an average of over eleven patients daily, Sundays included. On December 1, there were three hundred and ninety-seven patients in the house at the end of the day. The largest census for any one day was four hundred and seventy-one on December 18, and the largest number of patients admitted on any one day, exclusive of tuberculous employees, was twenty-eight on November 30. A number of former patients of the Mont Alto and Cresson Sanatoria were selected to act as orderlies and wardmaids of our new institution.

While the buildings were complete in all essentials, there were numerous details to be finished and the grounds were in decidedly rough condition. Throughout November and December much work along these lines was carried forward.

Very great assistance in organizing the working staff was afforded by Miss Alice M. O'Halloran, the Chief Visiting Dispensary Nurse.

Beginning the first Sunday the Sanatorium was open, weekly religious services have been held in the dining rooms by both the Roman Catholic and Protestant Clergy.

Thanksgiving was celebrated by a concert given by the patients in the East Dining Room.

Christmas was celebrated by a general decoration of the entire Institution with evergreens and other Christmas symbols; the Christmas trees in each of the solaria, in the patients' dining rooms, and in the quarters of the help and staff were a notable part of the celebration. The Department's usual plan of asking the relatives and friends of patients to address their Christmas remembrances in care of the Institution was followed and the gifts, having been piled under the Christmas trees, were distributed to their owners on Christmas Eve. The distribution was carried on by Mr. and Mrs. Santa Claus, who arrived by special train from the North Pole just in time for the celebration. Our baker entered into the spirit of the occasion and at the cost of much extra work on his part we were able to give each patient a little bag filled with small Christmas cakes. A census of the Institution was taken and showed that every patient, every one of the help, and every member of the staff had received a remembrance of some character. In a few instances among the patients, the bag of cakes and candies was the only gift. The happiness of one poor dying man was most touching. He demanded that the bag be hung on the head of his bed and with sparkling eyes and a happy smile called to it the attention of every passer-by. There were many who felt that the happiness of this man alone was sufficient payment for all the labor of the preparation.

A vaudeville entertainment was given by a company of the patients under the direction of several of the nurses on Christmas afternoon. This was enjoyed by all.

Numerous donations of various articles for the benefit of the patients have been received. A list of the donors is appended.

Tabulated statistical reports given below will show the number of patients admitted and treated up to and including December 31, 1914. There was a total of five hundred and fifty-six patients admitted and their total hospital days were twenty thousand three hundred and thirty-seven (20,337). Of the five hundred and fifty-six cases admitted, five hundred and forty-nine were in the advanced stages of the disease. Of the ninety-nine discharged, one-fourth, or twenty-three, were discharged by death. Of the remaining seventy-six, there were fifty who showed more or less improvement. Although our report shows one case discharged as "Arrested," this is because the patient was admitted in that condition as an employee.

Among the twenty-three cases that died, the following complications acting as contributing causes of death were noted:

Endocarditis, Chronic,	2
Endocarditis, Chronic, and Terminal Pulmonary Haemorrhage,....	1
Gastritis, Chronic Atrophic,	1
Haemorrhage, Pulmonary (Terminal),	1
Laryngitis with Enteritis, Tuberculous,	2
Laryngitis with Pulmonary Abscess,	1
Laryngitis, with Peritonitis, Tuberculous,	2
Laryngitis, Tuberculous,	3
Laryngitis, Tuberculous, with Chronic Endocarditis,	1
Laryngitis with Pneumothorax,	1
Meningitis, Tuberculous,	2
Meningitis with Empyema and Tuberculous Orchitis,	1
Nephritis, Chronic Interstitial,	1

Of the twenty-three deaths, three occurred within one week after admission, one of these being within twenty-four hours.

During the period between the opening of the Institution and the close of the year, the following operations were performed:

One Appendectomy.

One Curettage and drainage for Osteomyelitis of the Knee and Tibia.

A list of the occupations of the discharged patients is given elsewhere.

Miscellaneous information concerning the cases discharged will be found tabulated.

PERSONS WHO MADE DONATIONS TO THE HAMBURG SANATORIUM DURING 1914.

Miss H. Clark, Harrisburg,	Pair arctics.
Mrs. Katherine Day, Wilkes-Barre, ..	Fruit for patients.
Mrs. Samuel G. Dixon, Bryn Mawr, ..	Games, Christmas tree decorations, etc.
Miss Catharine A. Dixon, Bryn Mawr, .	Ties and wristlets.
Mrs. Sidney Miner, Wilkes-Barre,	Christmas tree decorations.
Mrs. George Sailer, Jeannette,	Clothing.
Mrs. Grace V. Smith, Lancaster,	Magazine stories.

OCCUPATIONS OF PATIENTS DISCHARGED FROM HAMBURG SANATORIUM, 1914.

MALE.

PROFESSIONAL GROUP,	1
Journalist,	1
CLERICAL AND OFFICIAL GROUP,	8
Bookkeepers, Clerks and Copyists,	6
Bankers, Brokers, Officials of Companies,	1
Others of this class not specified,	1

MERCANTILE AND TRAINING GROUP,	9
Apothecaries, Pharmacists,	2
Commercial Travelers,	3
Merchant, Dealers,	1
Hucksters, Peddlers,	2
Others of this class not specified,	1
PERSONAL SERVICE GROUP,	2
Barbers, Hairdressers,	1
Policemen, Watchmen, Detectives,	1
LABORING AND SERVANT GROUP,.....	9
Laborers (Not Agricultural)	8
Servants,	1
MANUFACTURING AND MECHANICAL INDUSTRY GROUP,....	21
Blacksmiths,	1
Brewers, Distillers, Rectifiers,	1
Butchers,	1
Cabinet Makers, Upholsters,	2
Clock and Watch Repairers, Jewelers,	1
Compositors, Printers, Pressmen,	1
Engineers and Firemen (Not Railway,)	1
Iron and Steelworkers,	2
Machinists,	1
Mill and Factory Operators (Textile)	1
Plumbers, Gas and Steam Fitters,	1
Tailors,	5
Tinners and Tinware Makers,	1
Others of this class not specified,	2
AGRICULTURAL AND TRANSPORTATION GROUP,.....	13
Draymen, Hackmen, Teamsters,	1
Farmers, Planters, Farm Laborers,	4
Miners and Quarrymen,	4
Steam Railroad Employees,	1
Others of this class not specified,	3
All other male occupations,	11
No occupation,	1

. FEMALE.

Laundresses,	1
Milliners,	1
Servants,	2
Stenographers, Typewriters,	1
Housewives,	13
All others,	2
No Occupation,	2

REASONS FOR DISCHARGE.

Infraction of rules,	6	Removed on request,	1
Deserted,	1	Transferred to another Sanatorium,	1
Against advice,	65	Death,	23

CHANGE OF WEIGHT IN PATIENTS DISCHARGED ALIVE.

	Gain.	Loss.	No Change.	Average Gain.
Incipient,	1	1	2	5.0 lbs.
Moderately advanced,	31	2	16	7.0 lbs.
Far advanced,	19	5	3	5.7 lbs.

MISCELLANEOUS.

Previous Medical History of Discharged Cases.

No record,	8	Pertussis,	29
No disease,	8	Rheumatism,	18
Diphtheria,	5	Pleurisy,	40
Pneumonia,	18	Syphilis,	2
Influenza,	19	Typhoid,	17
Measles,	52	Frequent colds,	53

The History of Contact is as follows:—

No record,	10	Work,	17
No contact,	49	Friends,	4
Home,	15	Other,	2

The Family History of Discharged Cases was as follows:—

Relatives affected:—

Father,	5	Sister,	8
Brother,	9	Maternal Aunt,	3
Paternal Aunt,	1	Maternal Uncle,	3
Paternal Uncle,	1	Maternal Grandfather,	1
Consort,	3	Maternal Grandmother,	2
Mother,	5	Children,	1
No history of tuberculosis,			56
No data obtainable,			7

The Character of the Dwellings of the Discharged Cases was as follows:—

Dwelling	Number of Rooms.		
No record,	10	No record,	17
Private house,	70	1 room,	4
Tenement,	13	2 rooms,	14
Boarding house,	4	3 rooms,	28
		4 rooms,	17
		5 rooms,	6
		6 rooms,	9
		8 rooms,	1
		9 rooms,	1

The average number of rooms to the family of 4.1 persons is 3.6.

The record of the Number of Persons in the Families of Patients Discharged and the Monthly Income of such Families is as follows:—

Number in Family.	Usual Monthly Income.		
No record,	12	No record,	9
1 in family,	8	No income,	7
2 in family,	11	Less than 10,	0
3 in family,	18	\$10.—19.,	4
4 in family,	16	20.—29.,	11
5 in family,	12	30.—39.,	7
6 in family,	6	40.—49.,	18
7 in family,	6	50.—59.,	8
8 in family,	6	60.—69.,	12
9 in family,	2	70.—79.,	3
		80.—89.,	3
		90.—99.,	2
		100. and over.,	8

Average number of persons in 85 families, 4.1
 Average monthly income, \$50.83
 Average per capita monthly income of the average family, 12.41

TABLE I.

MOVEMENT OF PATIENTS OF THE HAMBURG SANATORIUM IN 1914.
ACCORDING TO SEX AND STAGE OF DISEASE.

		Total.*	Incipient.	Per cent.	Moderately advanced.	Per cent.	Far advanced.	Per cent.
Patients remaining January 1, 1914, ..	Total,...	0	0	.....	0	.....	0	.....
	Male, ..	0	0	.....	0	.....	0	.....
	Female, ..	0	0	.....	0	.....	0	.....
Patients admitted,	Total,...	554	4	0.7	286	51.6	264	47.8
	Male, ..	399	2	.....	207	.....	190	.....
	Female, ..	155	2	.....	79	.....	74	.....
Patients discharged alive,	Total,...	74	4	5.4	43	58.1	27	36.5
	Male, ..	59	2	.....	36	.....	21	.....
	Female, ..	15	2	.....	7	.....	6	.....
Deaths,	Total,...	23	0	.....	3	13.0	20	86.9
	Male, ..	16	0	.....	3	.....	14	.....
	Female, ..	7	0	.....	1	.....	6	.....
Patients remaining December 31, 1914,	Total,...	457	0	.....	240	52.5	217	47.5
	Male, ..	324	0	.....	169	.....	155	.....
	Female, ..	133	0	.....	71	.....	62	.....
Patients treated during 1914,	Total,...	554	4	0.7	286	51.6	264	47.8
	Male, ..	399	2	.....	207	.....	190	.....
	Female, ..	155	2	.....	79	.....	74	.....

*Two unclassified cases not included.

TABLE II.

RECORD OF RESULT OF TREATMENT OF PATIENTS DISCHARGED FROM THE HAMBURG SANATORIUM IN 1914, ACCORDING TO STAGE OF DISEASE AND LENGTH OF STAY.

Admission Classification.	Discharge Classification.		Less than 3 months.	3-6 months.	6-9 months.	9-12 months.	12-18 months.	18-24 months.	24 months and more.	Average hospital days.
Total, .....	.....	*97	97	.....	.....	.....	.....	.....	.....	25.0
Incipient, 4 cases,	Apparently cured,	0	.....	.....	.....	.....	.....	.....	.....	.....
	Arrested,	0	.....	.....	.....	.....	.....	.....	.....	.....
	Improved,	2	2	.....	.....	.....	.....	.....	.....	17.0
	Progressive,	2	2	.....	.....	.....	.....	.....	.....	8.5
	Dead,	0	.....	.....	.....	.....	.....	.....	.....	.....
Moderately advanced, 46 cases,	Apparently cured,	0	.....	.....	.....	.....	.....	.....	.....	5.0
	Arrested,	1	1	.....	.....	.....	.....	.....	.....	30.5
	Improved,	31	31	.....	.....	.....	.....	.....	.....	30.5
	Progressive,	11	11	.....	.....	.....	.....	.....	.....	13.2
	Dead,	3	3	.....	.....	.....	.....	.....	.....	26.0
Far advanced, 47 cases,	Apparently cured,	0	.....	.....	.....	.....	.....	.....	.....	.....
	Arrested,	0	.....	.....	.....	.....	.....	.....	.....	.....
	Improved,	17	17	.....	.....	.....	.....	.....	.....	32.2
	Progressive,	10	10	.....	.....	.....	.....	.....	.....	20.1
	Dead,	20	20	.....	.....	.....	.....	.....	.....	22.9

*Two unclassified cases not included.

TABLE III.

RECORD OF RESULT OF TREATMENT OF PATIENTS DISCHARGED FROM THE HAMBURG SANATORIUM IN 1914, ACCORDING TO AGE AND STAGE OF DISEASE.

	Age periods.	Total.	Per cent.	Apparently cured.	Per cent.	Arrested.	Per cent.	Improved.	Per cent.	Progressive.	Per cent.	Dead.	Per cent.
Total, .....	.....	*97	.....	0	.....	1	1.0	50	51.5	23	23.7	23	23.7
Total, .....	.....	4	.....	0	.....	0	.....	2	50.0	2	50.0	.....	.....
-15 .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15-24	4	100.0	0	.....	0	.....	.....	2	50.0	2	50.0	.....	.....
Incipient,	25-34 .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
35-44 .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
45-54 .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
55- .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, .....	.....	46	.....	0	.....	1	2.2	31	67.4	11	23.9	3	6.5
-15 .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15-24	17	36.9	0	.....	1	5.9	13	76.5	3	17.6	.....	.....	.....
Moderately advanced, ..	25-34	14	30.4	0	.....	0	.....	2	57.1	4	28.6	2	14.3
35-44	8	17.4	0	.....	0	.....	4	50.0	3	37.5	1	12.5	
45-54	4	8.7	0	.....	0	.....	4	100.0	0	.....	0	.....
55-	3	6.5	0	.....	0	.....	2	66.7	1	33.3	0	.....
Total, .....	.....	47	.....	0	.....	0	.....	17	36.2	10	21.3	20	42.5
-15 .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15-24	12	25.5	0	.....	0	.....	3	25.0	1	8.3	8	66.7	
Far advanced,	25-34	20	42.5	0	.....	0	.....	10	50.0	5	25.0	5	25.0
35-44	12	25.5	0	.....	0	.....	4	33.3	4	33.3	4	33.3	
45-54	3	6.4	0	.....	.....	.....	.....	0	.....	0	.....	3	100.0
55- .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

*Two unclassified cases not included.

Average age—All classes, 28.0 years.
 Incipient, 19.3 years.
 Moderately advanced, 26.8 years.
 Far advanced, 29.7 years.
 Deaths, 30.0 years.

TABLE IV.

RECORD OF PATIENTS DISCHARGED FROM THE HAMBURG SANATORIUM IN 1914, ACCORDING TO STAGE OF DISEASE,
SEX, COLOR, AND SOCIAL CONDITION.

	Total.	White.	Black.	Other.	Single.	Married.	Widowed.	Divorced.	Separated.
Total,	*97	95	2	0	†18 (0)	44	4	0	1
Total,	4	4	0	0	3	1	0	0	0
Male,	2	2	0	0	2	0	0	0	0
Female, ...	2	2	0	0	1	1	0	0	0
Total,	43	42	1	0	23	13	1	0	1
Male,	36	36	0	0	21	13	1	0	1
Female, ...	7	6	1	0	2	5	0	0	0
Total,	27	27	0	0	10	17	0	0	0
Male,	21	21	0	0	8	13	0	0	0
Female, ...	6	6	0	0	2	4	0	0	0
Total,	23	22	1	0	12	8	3	0	0
Male,	16	15	1	0	10	6	0	0	0
Female, ...	7	7	0	0	2	2	3	0	0

*Two unclassified cases not included.

†In parenthesis those under fifteen.

TABLE V.

RECORD OF NEGRO PATIENTS DISCHARGED FROM THE HAMBURG SANATORIUM IN 1914, ACCORDING TO STAGE OF DISEASE AND RESULT OF TREATMENT.

Classification.	Total.		Apparently cured.		Arrested.		Improved.		Progressive.		Dead.	
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Total,	2	....	0	....	0	....	1	50.0	0	....	1	50.0
Incipient,	0	....	0	....	0	....	0	.....	0	....	0	.....
Moderately advanced,	1	50.0	0	....	0	....	1	100.0	0	....	0	.....
Far advanced,	1	50.0	0	....	0	....	0	.....	0	....	1	100.0

TABLE VI.

RECORD OF PATIENTS DISCHARGED FROM THE HAMBURG SANATORIUM IN 1914, ACCORDING TO STAGE OF DISEASE, SEX, NATIVITY, AND PARENTAL NATIVITY.

	Total.*	Incipient.			Moderately Advanced.			Far Advanced.			Dead.		
		Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.
Total.	97	4	2	2	48	36	7	27	21	6	23	16	7
United States,	63	3	1	2	28	25	3	18	14	4	14	9	5
Ireland,	3	0	0	0	1	1	0	1	1	0	1	1	0
Germany,	2	0	0	0	1	0	1	1	0	1	0	0	0
Italy,	8	1	1	0	2	2	0	2	2	0	3	3	0
Hungary,	6	0	0	0	3	1	2	3	2	1	0	0	0
Russia,	8	0	0	0	2	2	0	1	1	0	5	3	2
Slavonia.§	0	0	0	0	0	0	0	0	0	0	0	0	0
Poland,	0	0	0	0	0	0	0	0	0	0	0	0	0
Scandinavia,	1	0	0	0	1	0	1	0	0	0	0	0	0
Other foreign,	6	0	0	0	5	5	0	1	1	0	0	0	0
Unstated,	0	0	0	0	0	0	0	0	0	0	0	0	0
Nativity—Father.													
Total,	97	4	2	2	43	36	7	27	21	6	23	16	7
United States,	45	1	0	1	20	19	1	12	8	4	12	8	4
Ireland,	9	0	0	0	3	3	0	5	5	0	1	0	1
Germany,	4	0	0	0	2	1	1	1	0	1	1	1	0
Italy,	4	0	0	0	2	2	0	2	2	0	0	0	0
Hungary,	11	0	0	0	3	1	2	3	2	1	5	3	2

Russia,	7	0	0	0	3	0	1	1	0	0	3	0	6
Slavonia, §	0	0	0	0	0	0	0	0	0	0	0	0	0
Poland,	0	0	0	0	0	0	0	0	0	0	0	0	0
Scandinavia,	2	0	0	1	0	1	0	0	0	1	1	1	0
Other foreign,	10	0	0	8	7	1	2	2	0	0	0	0	0
Unstated,	5	3	2	1	0	1	1	1	0	0	0	0	0
Nativity—Mother.													
Total,	97	4	2	2	43	7	27	21	6	23	16	7	7
United States,	49	2	0	2	22	2	13	9	4	12	8	4	4
Ireland,	9	0	0	0	3	0	5	5	0	1	0	1	1
Germany,	5	0	0	0	3	1	1	0	1	1	1	0	0
Italy,	4	0	0	0	2	0	2	2	0	0	0	0	0
Hungary,	10	0	0	0	2	0	3	2	1	5	3	2	2
Russia,	7	0	0	0	3	0	1	1	0	3	3	0	0
Slavonia, §	0	0	0	0	0	0	0	0	0	0	0	0	0
Poland,	0	0	0	0	0	0	0	0	0	0	0	0	0
Scandinavia,	2	0	0	1	0	1	0	0	0	1	1	0	0
Other foreign,	9	0	0	7	6	1	2	2	0	0	0	0	0
Unstated,	2	2	0	0	0	0	0	0	0	0	0	0	0

*Two unclassified cases not included.
 §I. c. other "Slaves."

TABLE VII.

COUNTY RESIDENCE OF PATIENTS TREATED AT THE HAMBURG SAN-
ATORIUM IN 1914.

County.	Discharged.	Remaining.	County.	Discharged.	Remaining.
Total,	*97	457	Juniata,	1	0
Adams,	0	0	Lackawanna,	5	11
Allegheny,	9	43	Lancaster,	1	4
Armstrong,	0	3	Lawrence,	0	3
Beaver,	1	4	Lebanon,	0	3
Bedford,	0	2	Lehigh,	1	8
Berks,	4	12	Luzerne,	7	32
Blair,	1	7	Lycoming,	2	1
Bradford,	2	1	McKean,	0	3
Bucks,	2	2	Mercer,	0	3
Butler,	0	4	Mifflin,	0	0
Cambria,	0	6	Monroe,	0	0
Cameron,	0	0	Montgomery,	0	9
Carbon,	0	2	Montour,	0	0
Centre,	0	0	Northampton,	1	16
Chester,	1	6	Northumberland,	2	4
Clarion,	0	1	Perry,	0	0
Clearfield,	0	7	Philadelphia,	38	180
Clinton,	0	1	Pike,	0	1
Columbia,	1	0	Potter,	0	1
Crawford,	0	1	Schuylkill,	4	17
Cumberland,	1	1	Snyder,	0	0
Dauphin,	6	18	Somerset,	0	2
Delaware,	1	9	Sullivan,	0	0
Elk,	0	2	Susquehanna,	0	1
Erie,	1	3	Tioga,	0	0
Fayette,	0	7	Union,	0	0
Forest,	0	0	Venango,	0	0
Franklin,	0	0	Warren,	1	1
Fulton,	0	0	Washington,	2	4
Greene,	0	0	Wayne,	0	0
Huntingdon,	0	0	Westmoreland,	1	2
Indiana,	0	1	Wyoming,	0	1
Jefferson,	1	5	York,	0	3

Two unclassified cases not included.

TABLE VIII.

SUMMARY OF RESULTS OF TREATMENT OF THE PATIENTS DISCHARGED FROM THE HAMBURG SANATORIUM IN 1914.

	Total.	Per cent.	White.	Black.	Male.	Female.	Married.	Single.	
Total,	*97	.....	95	2	75	22	19	48	
Incipient	Total,	4	4.1	4	0	2	2	1	3
	Apparently cured,	0	.....	0	0	0	0	0	0
	Arrested,	0	.....	0	0	0	0	0	0
	Improved,	2	50.0	2	0	1	1	0	2
	Progressive,	2	50.0	2	0	1	1	1	1
	Dead,	0	.....	0	0	0	0	0	0
Moderately Advanced	Total,	46	47.4	45	1	38	8	22	24
	Apparently cured,	0	.....	0	0	0	0	0	0
	Arrested,	1	2.2	1	0	1	0	0	1
	Improved,	31	67.4	30	1	25	6	16	15
	Progressive,	11	23.9	11	0	10	1	4	7
	Dead,	3	6.5	3	0	2	1	2	1
Far Advanced	Total,	47	48.4	46	1	35	12	26	21
	Apparently cured,	0	.....	0	0	0	0	0	0
	Arrested,	0	.....	0	0	0	0	0	0
	Improved,	17	36.2	17	0	14	3	12	5
	Progressive,	10	21.3	10	0	7	3	5	5
	Dead,	20	42.5	19	1	14	6	9	11

*Two unclassified cases not included.



MAY 10 1923

